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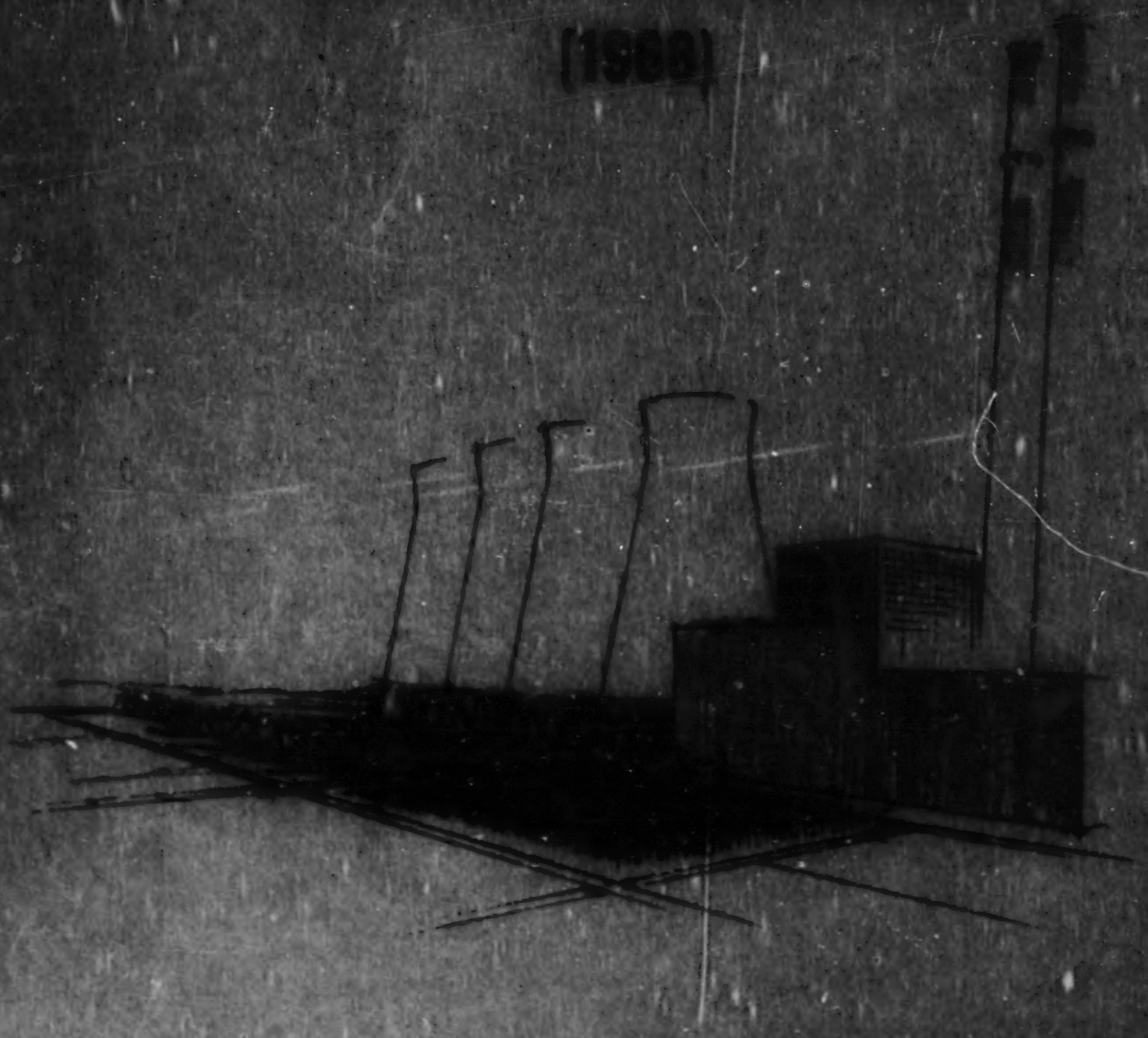
LARGE POWER PLANT EFFLUENT STUDY (LAPES)

VOLUME 1 - INSTRUMENTATION, PROCEDURES, AND DATA TABULATIONS (1968)



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Francis A. Schiermeier and Lawrence E. Niemeyer

Division of Meteorology

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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ABSTRACT

The Large Power Plant Effluent Study (LAPPES) was initiated in Western Pennsylvania to evaluate the extent and effects of air pollution resulting from the largest complex of coal-burning generating stations in the United States. During 1968 four series of field experiments were conducted in an area surrounding the Keystone Generating Station; these experiments consisted of ground-based and airborne plume measurements supported by extensive meteorological observations. Part 1 ~~of this volume~~ describes the topography and climatology of the generating station complex, the sulfur dioxide and meteorological monitoring equipment, and experiment operating procedures. Part 2 presents tabulations of plant operational parameters and air quality and meteorological data collected during 1968.

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LARGE POWER PLANT EFFLUENT STUDY (LAPPES) VOLUME 1 - INSTRUMENTATION, PROCEDURES, AND DATA TABULATIONS (1968)

INTRODUCTION

Cognizant of the need for clean air, the electric power industry in many instances has adopted the tall stack in its endeavor to maintain reasonable air quality at ground level surrounding generating stations of ever increasing capacity. Considerable debate is underway, however, on both the national and international scene regarding the effectiveness and performance of these stacks in overall pollution management.[1,2,3] Questions raised by health and air pollution control agencies regarding the potential effects of airborne effluents from these plants cannot be answered in a definitive way by simple extrapolation of experience from existing smaller capacity installations. Accordingly, the National Air Pollution Control Administration (NAPCA) is conducting a five-year comprehensive field study to determine the extent and effects of power plant emissions from tall stacks. Specifically, three objectives are being pursued at the Western Pennsylvania site:

1. To develop and validate transport and diffusion models with which to calculate ground-level concentrations of effluents from large power plants with tall stacks.

2. To measure the magnitude, frequency, and spatial distribution of ground-level concentrations from large power plants with tall stacks, singly and in combination, and to compare the observed data with calculated predictions.

3. To evaluate the effects of sulfur compounds and other effluents from a large power plant complex on vegetation in the region of the installations.

The LAPPES Project is sponsored by the National Air Pollution Control Administration with field activities conducted by on-site personnel. Office facilities are maintained at Jimmy Stewart Airport in Indiana, Pennsylvania. Also cooperating in the study are Pennsylvania Electric Company and the Division of Air Pollution Control of the Pennsylvania State Department of Health. During the 1968 field experiments, additional contract and voluntary participation was provided by Stanford Research Institute, Sign X Laboratories, Meteorology Research Incorporated, and Brookhaven National Laboratory.

LAPPES consists of two complementary efforts, the first concerned with meteorological and air quality measurements and the second with agricultural effects data. The meteorological portion of the study is conducted along three interrelated lines of investigation: (1) determination of plume rise under a variety of atmospheric conditions; (2) determination of plume dispersion, both vertical and horizontal, as a function of downwind distance and atmospheric conditions; (3) determination of the magnitude, areal extent, and occurrence frequency of sulfur dioxide concentrations at ground level after emission from tall stacks. The agricultural segment of LAPPES will attempt to evaluate effects of power plant emissions on the agricultural economy of the adjacent region which consists largely of Christmas tree plantations.

The purpose of this volume is to present the meteorological and air quality data collected during 1968 in support of the first two LAPPES objectives. Specifically, Part 1 will describe the power station complex and the equipment, procedures, and techniques used in conducting the field experiments, in measuring air quality and meteorological parameters, and in reducing and processing data. Part 2 will present tabulations of the basic data and pertinent supplementary data.

This volume is not intended to present analyses of the data, to evaluate existing plume rise and dispersion theories, or to develop new diffusion models; these objectives will be covered in future volumes. A previous publication dealing with LAPPES consists of a general description of the project goals and activities.[4] Final reports have been received from three LAPPES subcontractors who participated during 1968.[5,6,7]

PART 1 - INSTRUMENTATION AND PROCEDURES

POWER PLANT DESCRIPTION

The largest complex of coal-burning generating stations in the United States is presently emerging in the Chestnut Ridge area of Western Pennsylvania shown in Figure 1. Three new mine-mouth stations, Keystone, Homer City, and Conemaugh, are located approximately equidistant along a NW-SE line 39 kilometers long about 80 kilometers ENE of Pittsburgh. These three stations, combined with the nearby Seward and Shawville stations, form a complex whose total annual production of 47,380,505 megawatt hours exceeds the total yearly electrical output of all but 11 nations of the world. The five stations, owned by a total of 12 electric utilities, are fed from coal mines located either directly under or close by the station sites.

The subject of LAPPES is the line of sources formed by the Keystone, Homer City, and Conemaugh Stations, whose stacks will emit a combined daily output exceeding 2000 metric tons of sulfur dioxide into the atmosphere. A distinct advantage of this location for the study is that air quality measurements can progress as each stack of each station becomes operational. The 1968 phase of LAPPES was conducted in the area surrounding Keystone. In subsequent phases the project area will be extended to include the Homer City and Conemaugh Stations, now under construction.

Keystone Station

The Keystone Generating Station, located just west of Shelocta, was the first of the three new mine-mouth stations to be completed (Figure 2). The station has an hourly generating capacity of 1.55×10^{12} calories (1800 megawatts) produced by two identical cross-compound turbine-generator units. The boilers, which produce 1.81×10^{12} calories per hour, consume as much as 590 metric tons of pulverized coal per hour. The coal is supplied by conveyor and truck from nearby mines. Four 99-meter-tall natural-draft cooling towers with a total evaporation rate of 34,000 to 49,000 liters of water per minute are used to provide recirculating water for steam condensation.

Boiler effluent is fed to the 244-meter-tall stacks after passing through two electrostatic precipitators per unit. The precipitators, with an efficiency rating of 99.5 percent, remove a combined total of 83 metric tons of flyash hourly. Each stack includes a 9.5-mm-thick steel liner, which tapers from 11 meters outside diameter at the base to 9.1 meters at the top. The top 9 meters of the stack is further constricted by a stainless steel liner, which has an interior (exit) diameter of

8.29 meters. Surrounding the liner is a concrete shell tapering from an outside base diameter of 20.4 meters to 10.4 meters at the top. The stacks are separated by 61.9 meters between centers while their relative positions are oriented 0.44°-224° from north. Unit #1 of the Keystone Station began commercial operation during August 1967; unit #2 followed in July 1968.[8,9]

Homer City Station

Second in line is the Homer City Station, which is located about 4 kilometers SSW of the Homer City Borough. The station is capable of generating 1.10×10^{12} calories hourly (1280 megawatts) by means of two tandem-compound turbine-generator units. The boilers, which hourly produce 1.28×10^{12} calories, consume 420 metric tons of finely ground coal per hour supplied by conveyor from two nearby mines. Two 119-meter-tall cooling towers provide recirculating water to condense the steam back into boiler water.

Boiler effluent reaches the 244-meter-tall stacks after passing through electrostatic precipitators which remove a total of 71 metric tons of flyash hourly. Each chimney consists of a 6.4-mm-thick steel liner surrounded by a concrete shell tapering from an outside base diameter of 19.1 meters to 9.5 meters at the top. Separation between stack centers is 53.0 meters while the inside (exit) diameter at the top is 7.29 meters. Orientation of the stacks is along a line 160°-340° from north.

The Homer City Station is so designed that a third unit with associated stack and cooling tower may be added if required. Unit #1 went into commercial operation during July 1969, while unit #2 followed in December 1969.[9]

Conemaugh Station

The third new generating station, Conemaugh, is situated at the village of Huff on the Conemaugh River. The Conemaugh Station is the near twin of Keystone, with identical boiler production and coal consumption. Also similar is the hourly generating capacity of 1.55×10^{12} calories (1800 megawatts). Because of the more abundant water supply, however, Conemaugh requires only two cooling towers, each 113 meters tall. Approximately 10.6×10^{5} liters of water are cooled from 48° to 32°C each minute to provide recirculating water for steam condensation.

The Conemaugh Station is similarly equipped with precipitators that will ensure removal of up to 100 metric tons of flyash hourly from the boiler effluent. The two 305-meter stacks are constructed of a 22.2-mm-thick steel liner encased in a tapered concrete shell ranging from an outside base diameter of 25.3 meters to a top diameter of 10.3 meters. Separation between stack centers is 61.9 meters while the inside (exit) diameter at the top is 8.29 meters. Orientation of the stacks is along a line 101°-281° from north.

Unit #1 of the Conemaugh Station is scheduled for commercial operation in April 1970, with the second unit to follow in February 1971.[9]

TOPOGRAPHY AND GENERAL CLIMATOLOGY

As shown by the topographic map in Figure 3, the generating stations are located in the Chestnut Ridge sector of the Allegheny Mountains. Typical of this area of Pennsylvania are the numerous creeks and rivers, and rolling hills rising 100 to 200 meters above the valley floors. The land has a general upward slope to the east to form the foothills of the Allegheny Mountains. Prominent features include the Chestnut Ridge, oriented NE-SW and situated between the Homer City and Conemaugh Stations, and the considerably higher Laurel Ridge, immediately southeast of Conemaugh.

The Keystone Station is situated in a shallow rural valley with the stack base at 305 meters MSL. Except for this valley, the surrounding terrain within 5 km is hilly with the highest peak reaching no more than mid-stack height. The Homer City Station is located on a plateau with much of the surrounding terrain lower than the stack base at 366 meters MSL. The highest peaks within 5 km are those of Chestnut Ridge to the SE, which range slightly higher than mid-stack. The station most susceptible to terrain influences will probably be Conemaugh. Separating this plant from Johnstown is the Laurel Ridge with some peaks reaching 150 meters above stack top. These hills along with Chestnut Ridge to the west may cause channeling of the plume. The stack base elevation at Conemaugh is 329 meters MSL.

The area of study has a humid continental type of climate modified slightly by its nearness to the Atlantic Seaboard and the Great Lakes. Summers are mild but frequently humid due to invasions of air from the Gulf of Mexico. Winters are reasonably brisk with occasional periods of extreme cold; spring and fall months have moderate to cool temperatures. Precipitation is well distributed throughout the year with appreciable snowfall in winter and the maximum frequency of thunderstorms in early summer.

Surface inversions are relatively frequent during the warmer months of the year; in winter, however, cloudiness persists because of this area's proximity to the track of west-east migratory storms and the frequent showery weather associated with NW winds across the Great Lakes. Cold air drainage induced by the many hills leads to the frequent formation of early morning fog, which may be quite persistent in the deeper valleys during the colder months. The study area is also subject to relatively frequent occurrences of stagnating anticyclones, a condition conducive to high ambient pollution levels because of the resulting poor ventilation.

HELICOPTER INSTRUMENTATION*

The primary source of airborne plume and meteorological measurements was an instrumented Bell Model 47J2 helicopter. The instrument package was designed and

*Mention of commercial products or company names does not constitute endorsement by The National Air Pollution Control Administration or the U.S. Department of Health, Education, and Welfare.

fabricated by Sign X Laboratories of Essex, Connecticut, and provided the observer with continuous, near-instantaneous measurements of sulfur dioxide and pressure height on the top recorder and temperature and wet bulb depression on the bottom (Figure 4). A description of the system follows:

1. Sulfur dioxide: electroconductivity method with time constant of 2.0-2.5 seconds; four ranges with full scale 1.0, 5.0, 10.0 or 50.0 ppm; flow rate of air sample, 2500 cc/min; flow rate of reagent, 25 cc/min; temperature compensation in analytical cell of 2.0 percent per degree C based on 25°C; sulfur dioxide removal from reagent accomplished by ion exchange resin.

2. Pressure height: double bourdon cell with time constant of 0.1 seconds; electrical output a linear function of pressure height according to standard atmosphere; four overlapping scales with 200 meters = 25.4 mm (1.0 inch) on chart.

3. Temperature: thermistor with time constant of 0.1-0.2 seconds; three overlapping scales with 4°C = 25.4 mm (1.0 inch) on chart.

4. Wet-bulb depression: thirty-junction thermopile with time constant of 0.1-0.2 seconds; one scale with 4°C = 25.4 mm (1.0 inch) on chart.

5. Sulfur dioxide scrubber: manually operated, water- and resin-activated; two identical inline tubes provide equivalent pressure drop whether scrubbing or sampling directly.

6. Recorders: Hewlitt-Packard Model 7100B; two-channel, with plug-in modules; full scale for each pen equivalent to half chart width with 2.54-mm-pen displacement to prevent collision; one minute marker and one event marker on each recorder; chart speed = 25.4 mm (1.0 inch) per minute.

The instrument package was mounted in the left passenger cockpit position facing the observer so that continuous monitoring of all four parameters could be maintained (Figure 5). Power was supplied by the aircraft's 24-volt DC power supply, subsequently converted to 115 volts AC by means of a Topaz static inverter contained in the baggage compartment.

The pressure-height sensor, attached to the lower right brace of the instrument package, was connected by means of Teflon tubing to the static line of the helicopter air speed indicator. The remaining three sensors were externally mounted on the left skid (Figure 6). The temperature and wet-bulb depression sensors were located respectively fore and aft in the 75-mm-diameter cylinder with the reservoir for the wet bulb occupying approximately one-fourth the inner volume. The air intake to the SO_2 analyzer was by means of 3.175-mm-interior-diameter (ID) Teflon tubing inserted in the trailing edge of the 1.8-meter-long, 22.2-mm-ID pipe

attached to the skid.

With an airflow of 2500 cc/min into the analyzer and a Teflon orifice in the probe of 1.19 mm ID, the isokinetic sampling speed for this unit was calculated as 24.3 mps. Actual flights were initially conducted at 17.9 mps (40 mph) and later changed to 22.4 mps (50 mph). Interference by downwash from the helicopter rotor occurs only when hovering and not during forward flight.

SULFUR DIOXIDE INSTRUMENTATION

Portable Bubblers

The portable bubblers used to measure ground-level SO_2 concentration under the plume were constructed by NAPCA personnel and designed to obtain six consecutive 30-minute samples (Figure 7). The units are powered by 7.5-volt batteries and maintain an average flow rate of 150 cc/min. Each of the six sampling tubes per bubbler contains 20 ml of West-Gaeke solution through which ambient air is drawn by a 6-volt motor driving a 200-cc/min-capacity pump. Additional tubes containing glass wool are installed downstream to prevent moisture from entering the pump assembly.

Switching between sampling tubes is accomplished by means of a synchronous timing motor and sequential valve. Millipore filters are inserted near the inlets to prevent admission of particulate matter as the sampling probe is only 15 cm above ground when operating. Analysis of bubbler samples is performed on a Technicon Autoanalyzer.

Technicon Autoanalyzer

The LAPPES office at Jimmy Stewart Airport is equipped with a Technicon Autoanalyzer, which serves the dual purpose of analyzing bubbler samples and monitoring ambient SO_2 (Figure 8). The Autoanalyzer is a colorimetric instrument using West-Gaeke solution as the absorbing reagent with the addition of sulfamic acid to depress interference from nitrogen dioxide. Components of the Autoanalyzer include a sampler, proportioning pump, heating bath, programmer, and colorimeter-recorder.

When used for on-stream monitoring, the flow rates of air and West-Gaeke solution through the absorbing column are 1 liter/min and 1.5 cc/min respectively. Ambient air is drawn through Teflon tubing with the intake on the office roof, 12 meters above surface; a Millipore filter is used to screen out airborne particulate matter. When used to analyze bubbler samples, the intake line from the absorbing column is switched to the sampler turntable where bubbler reagent is contained in individual sample cups.

The transmittance of the colored complex is measured at 572 mμ with a 50-mm flow cell in the colorimeter. Calibration curves for data reduction are computed by analyzing standards each time new reagents are prepared.[10]

METEOROLOGICAL INSTRUMENTATION

Fixed Network at Jimmy Stewart Airport

Several meteorological variables are routinely monitored at Jimmy Stewart Airport as part of LAPPES; these include wind speed and direction, temperature, relative humidity, hourly precipitation, and solar radiation (Figure 9). The surface elevation for these observations is 427 meters MSL, which is exactly the mid-stack height of the Keystone Generating System.

The Aerovane wind transmitter is mounted on a 10-meter tower as shown in Figure 9. Because of a nearby active runway, the FAA required the tower be erected within 25 meters of the two-story office building. Winds from the quadrant centered on 090° may be affected by the obstruction and should be so regarded in the ensuing data summary.

The Aerovane is equipped with a six-bladed impeller whose starting speed is about 0.7 mps; wind direction is sensed by the streamlined vane. Values for the wind speed and direction are electrically transmitted and recorded continuously on a two-channel recorder. Range of wind speed is 0 to 44.7 mps (0 to 100 mph) on one channel; range of wind direction is 540 degrees of azimuth, allowing for crossover, on the other channel. Speed of chart rotation is 76.2 mm (3.0 inches) per hour.

Hourly temperature and relative humidity values were obtained from a standard U. S. Weather Bureau hygrothermograph positioned in a louvered "cotton-region type" shelter. Maximum and minimum thermometers and a sling psychrometer were used to maintain quality control on the hygrothermograph. Precipitation totals were obtained from a weighing bucket rain gage with verification provided by a standard 20.32-cm (8-inch) gage.

An Eppley pyranometer provided hourly values of total sun and sky radiation. Measurements are produced as a result of a voltage difference between two exposed concentric rings, one painted with lampblack, the other smoked with magnesium oxide. A continuous record was maintained by means of a Leeds and Northrup Speedomax H recorder. Full pen displacement is equivalent to 2 langleys per minute while the speed of chart rotation is 50.8 mm (2.0 inches) per hour.

Special Observations

Radiosonde Releases - In support of the airborne plume and meteorological measurements, free radiosondes were released twice daily during selected experimental periods from Jimmy Stewart Airport. A 100-gram pilot balloon inflated to about 1100 grams carried the 403-megacycle package aloft at a rate of about 300 meters/min (Figure 10). Transmissions of temperature and humidity were recorded on a 403-megacycle receiver using a fixed dipole antenna while visual tracking by theodolite

provided winds aloft data (rabal). Both receiver and theodolite monitoring were terminated at 700 millibars.

Pilot-Balloon Ascents - Winds aloft were measured during experiments at the Keystone Station by double-theodolite observations of pilot balloons. Inflation of 30-gram balloons to about 45 grams provided an average ascension rate of 130 meters/min. Except when obscured by steam or smoke plumes, the azimuth and elevation angles were read at 30-second intervals for a period of 10 minutes.

OPERATING PROCEDURES FOR LAPPES EXPERIMENTS

Airborne measurements of the Keystone plume during 1968 were obtained during four separate flight periods designated as the March, May, July, and October series respectively. Unless prevented by plant shutdown, helicopter malfunction, or adverse weather, helicopter flights were conducted every day during these periods. Adverse weather for this type of experiment included ceilings lower than the plume, excessive ground fog, or winds too strong to permit takeoff; rain or snow alone did not curtail the flights. In order to permit visual observation of the plume, Pennsylvania Electric Company (Penelec) personnel reduced precipitator efficiency to allow limited flyash release during periods in which experiments were conducted.

Usually two flights, each lasting about 150 minutes, were made on a series day. The first commenced at dawn while the plume was normally isolated from the ground by stable atmospheric layers near the surface. This flight consisted of three cross sections preceded and followed by a 1000-meter vertical temperature profile just upwind of the Keystone stacks. The cross sections were made at 4-, 10-, and 16-km arcs downwind and consisted of successive crosswind flights through the plume at 60-meter vertical intervals; occasionally 30-meter intervals were flown to better define the top and bottom edges. The first traverse of each cross section was made approximately midway between top and bottom with successively higher traverses until the top was reached, then lower from the center until the bottom was reached. In some cases this procedure was reversed with the lower half of the plume flown first. If a forward speed of 40 mph (later changed to 50 mph) is constant and if surface reference points are recorded during plume passage, traverse data can be used to reconstruct the geometry of the plume.

The second flight of a series day began simultaneous to normal temperature transition during which the layer in which the plume was imbedded was brought to the ground. In addition to two or three more temperature profiles, the x and y dimensions of ground-level SO_2 concentrations were obtained by flying the helicopter parallel and normal to the plume's longitudinal axis near the surface. This treetop-level flight was usually continued as long as fuel permitted unless the ground-level concentrations originating from the plume terminated sooner. Occa-

sionally a third flight was executed during the afternoon to measure the effects of a looping plume or the sustained downwash from a limited mixing layer regime. If no ground-level concentrations occurred on a particular day, the second flight was sometimes used to repeat one or more cross sections. All plume cross section and crosswind ground-level traverses were flown in the shape of arcs centered on the Keystone stacks.

Helicopter measurements of ground-level concentrations were complemented with a series of consecutive 30-minute samples made by eight bubblers on the ground beneath the plume. Placement of these portable units was dependent on helicopter location of the plume aloft and usually spanned the expected lateral projection, to the ground, of the plume aloft, ranging from near the plant to as far out as 14.5 km. On days of drastic plume shift as determined from helicopter observation prior to inversion breakup, the bubblers that had already been set out were not analyzed when it was obvious they were not influenced by the plume.

Prior to and after the daily airborne operations radiosondes were released at Jimmy Stewart Airport. Although detailed helicopter temperature measurements revealed the stability through the plume's vertical extent, the radiosondes detected such other pertinent features as subsidence inversions aloft. In addition, these releases will provide a means of comparing the climatology of Pittsburgh with that of the immediate area. Between these two releases, double-theodolite pibals were taken every 30 minutes at the Keystone Station to provide wind data directly affecting plume dispersion.

SELECTED PLUME PHOTOGRAPHS

To assist in the physical interpretation of data contained in Part 2 of this volume, four selected plume photographs are presented in Figures 11-14 on pages 407 through 410 of this document. Vertical stability and wind data for these cases may be found in Tables 8-10 while dimensions of the first three plumes are listed in Table 3. In all four photographs, a visible plume was accomplished by limited flyash emission.

Figure 11 presents an example of overshoot under stable atmospheric conditions. The plume was isolated from the surface by a 9.2°C inversion that extended up to 450 meters (above stack base); upper vertical extent was restricted by a second inversion between 600 and 630 meters. Another example of plume stability is shown in Figure 12. A combination of inversion and isothermal layers up to 550 meters was responsible for the limited vertical diffusion. It is interesting to note that the upper edge of the haze layer corresponds to the slight subsidence of the plume downwind.

Figure 13 illustrates the dispersion of the Keystone plume under light wind conditions. The slight overshoot above the plant quickly subsides so that the

plume's upper edge at 4 km downwind coincides with the base of the capping inversion at 1000 meters. Notice the distinct upper boundary of the haze layer, also trapped by the inversion aloft.

An example of a looping plume reaching the surface is illustrated in Figure 14. Because of helicopter malfunction during the morning, no cross sections were flown in this plume. Wind and temperature data were measured, however, and are presented in Part 2.

CONTRACT AND VOLUNTARY PARTICIPATION IN LAPPES PROJECT

In addition to observations by NAPCA personnel, three subcontractors and one voluntary participant in the LAPPES Project during 1968 provided data of interest. As a voluntary participant, Brookhaven National Laboratory used a fixed-wing aircraft to collect Keystone plume samples for isotopic analysis. The S_{32}/S_{34} ratio in these samples was compared to the corresponding ratio in the supply coal in an attempt to establish a correlation. In addition to collecting plume samples, Brookhaven personnel mapped vegetation in the local area using infrared film.

Under contract to NAPCA a team of scientists from Stanford Research Institute used a Mark V neodymium lidar to measure plume rise and to define plume geometry at various distances from the stack during the May and October series. This was accomplished by a vertical scanning technique with increments of 1° to 10° depending upon the plume's vertical extent. Such scans were obtained by locating to the side of the plume and scanning perpendicular to its mean centerline and at 45° on either side of the perpendicular, thus obtaining three cross sections from a single location. The lidar was also used to check plume continuity by procuring cross sections at a fixed distance downwind at 15-minute intervals during an entire morning. Results have been summarized in a final report.[5]

A second contractor also observed plume rise during the May and October series. A meteorologist from Sign X Laboratories used an instrumented helicopter to obtain cross sections and to perform vertical ascents and descents through the plume within 8 km of the stack. Instrumentation used in the Sign X helicopter was similar to that in the LAPPES aircraft with one exception: in addition to the sulfur dioxide, pressure-height, temperature, and wet-bulb sensors, a space charge derivative unit was used to detect charged particulates in the plume. This enabled simultaneous comparisons with SO_2 measurements and provided estimates of plume dimensions during each traverse of both particulates and SO_2. Results have been summarized in a final report.[6]

Also under contract to NAPCA, personnel from Meteorology Research Incorporated flew an instrumented Aztec to obtain particle size distribution and turbulence measurements in the Keystone plume during the October series. Measurements were

made, using a continuous-cloud particle sampler and moving slide impactor, of flyash particle size in both the "dirty" and "clean" plumes, dirty referring to 50 percent passage of flyash out the stack and clean denoting all precipitators in operation. Measurements with a universal turbulence indicator system were made under various meteorological conditions in the Keystone plume and in the vicinity of the Homer City and Conemaugh Generating Stations. The flight pattern used for measurement of both parameters consisted of lengthwise flights in the plume and successive horizontal traverses downwind. Results have been summarized in a final report.[7]

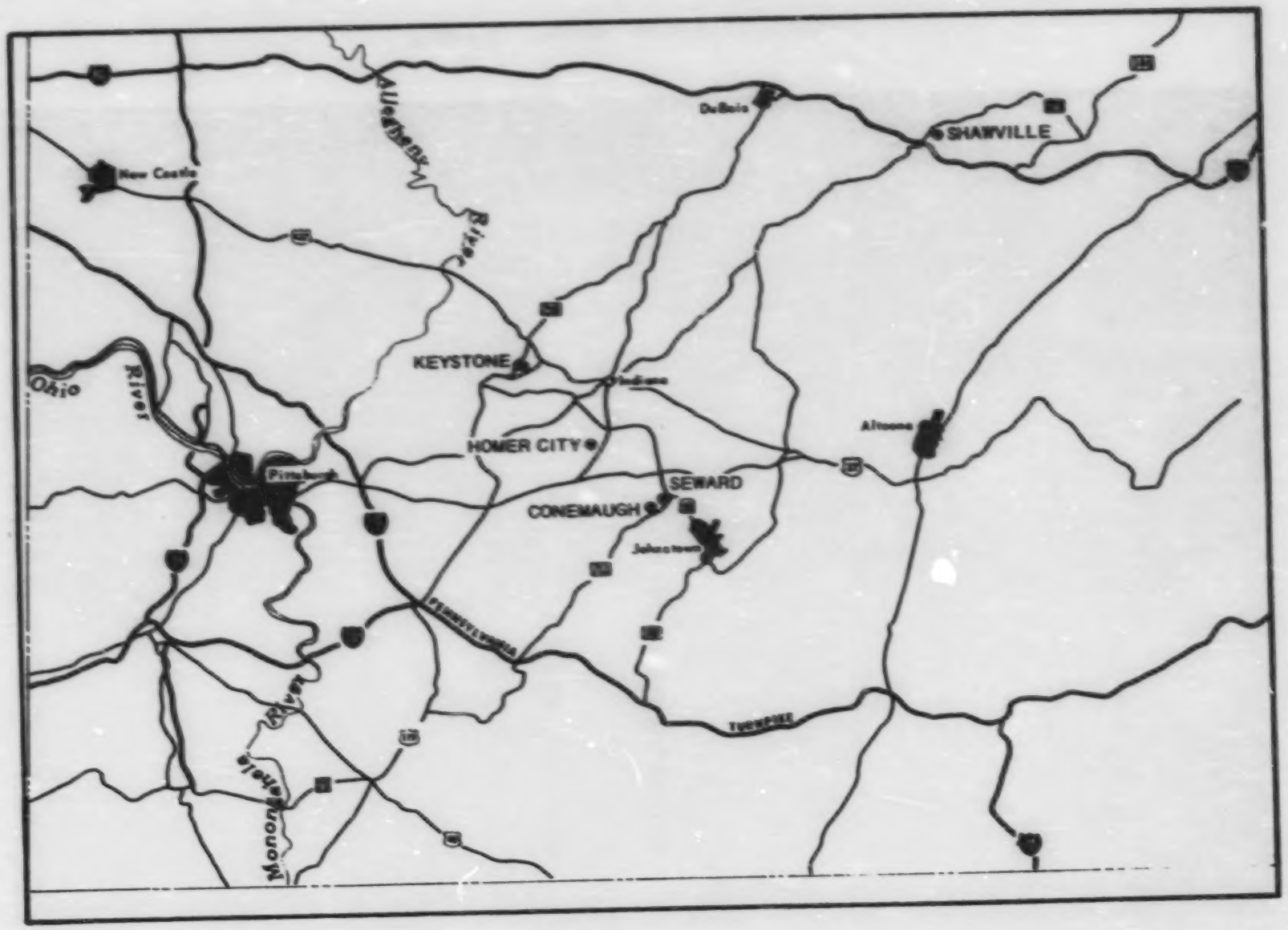


Figure 1. Locations of generating stations.

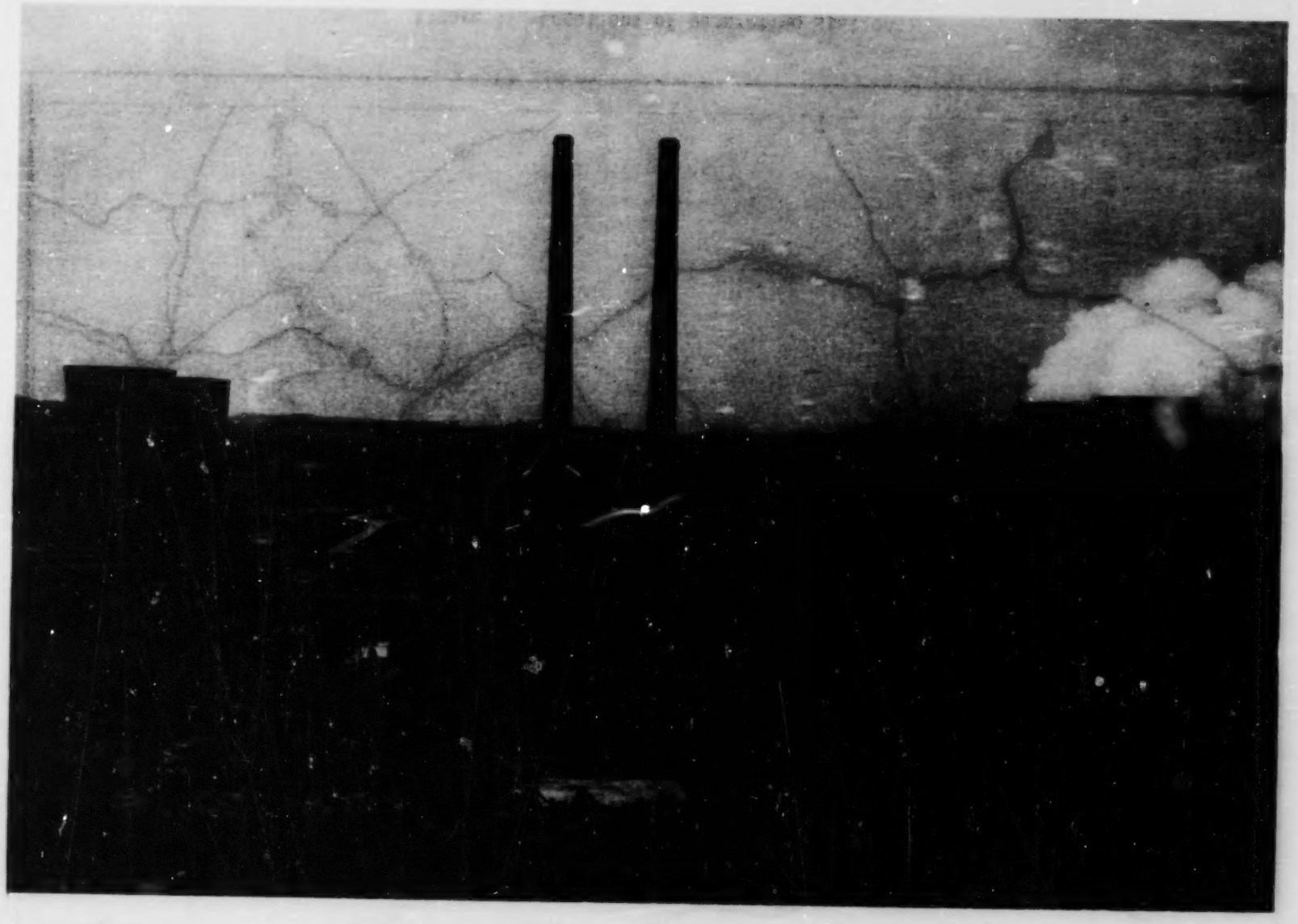


Figure 2. Keystone Generating Station.

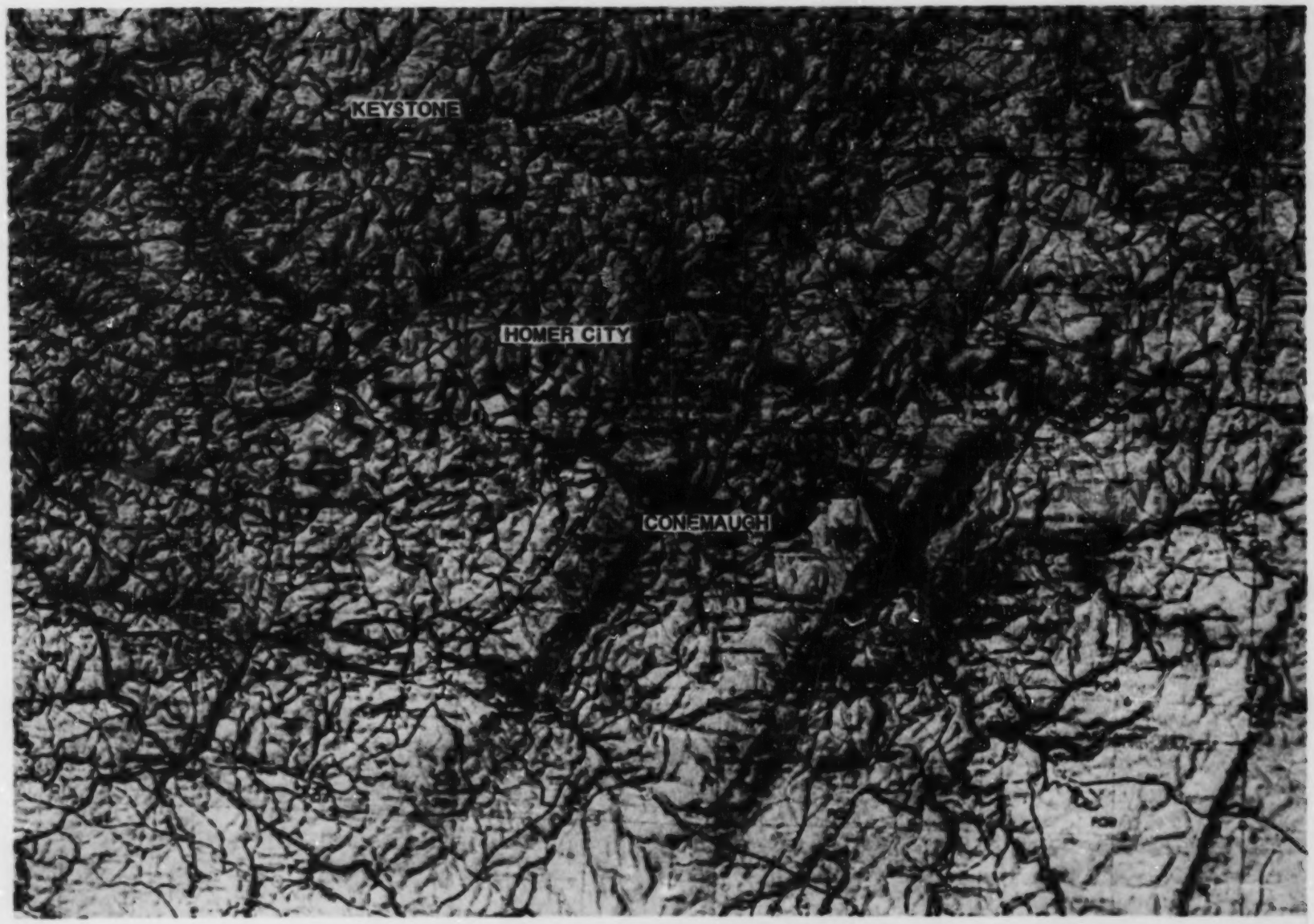


Figure 3. Topography of generating station complex.

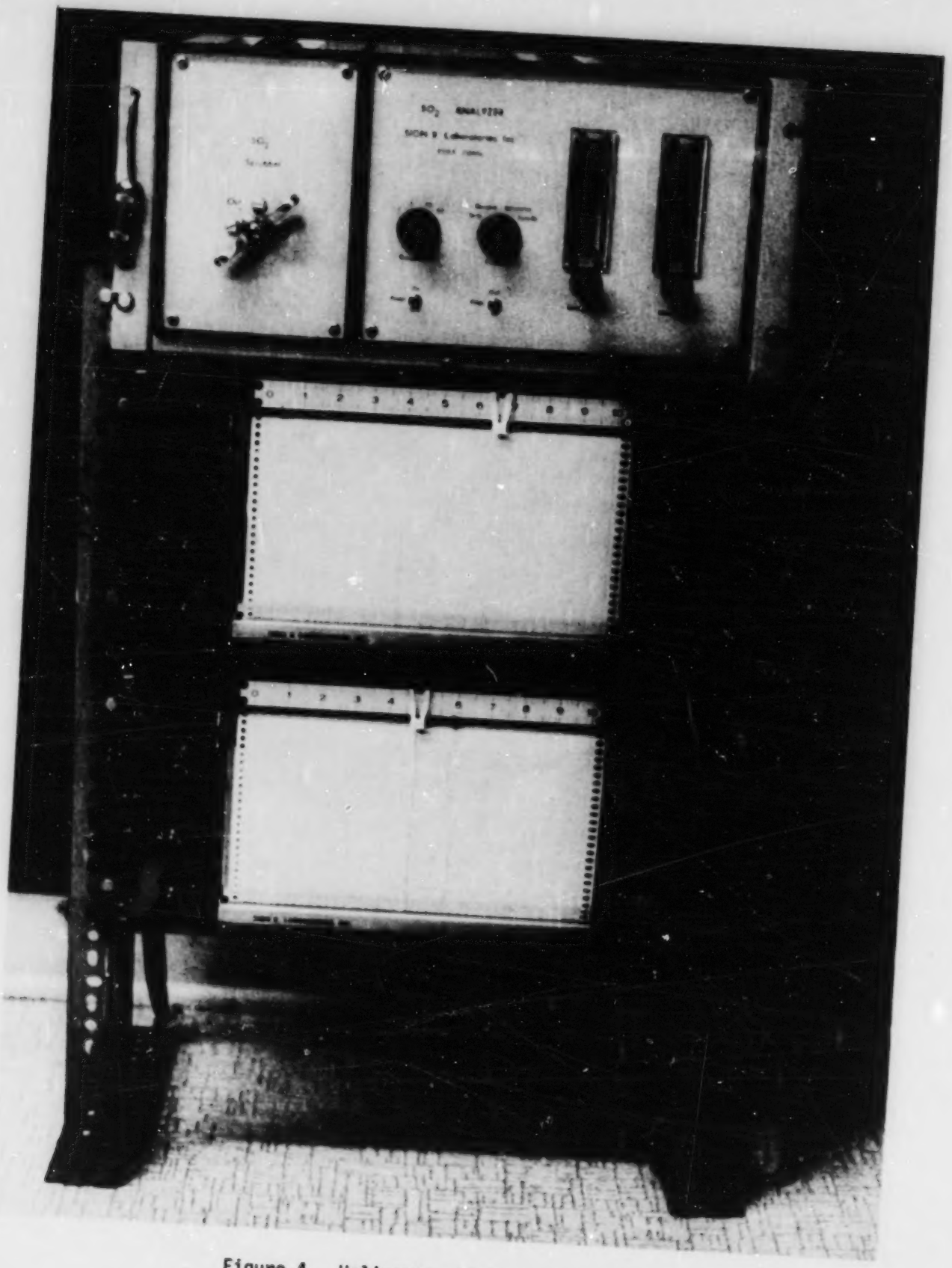


Figure 4. Helicopter instrument package.

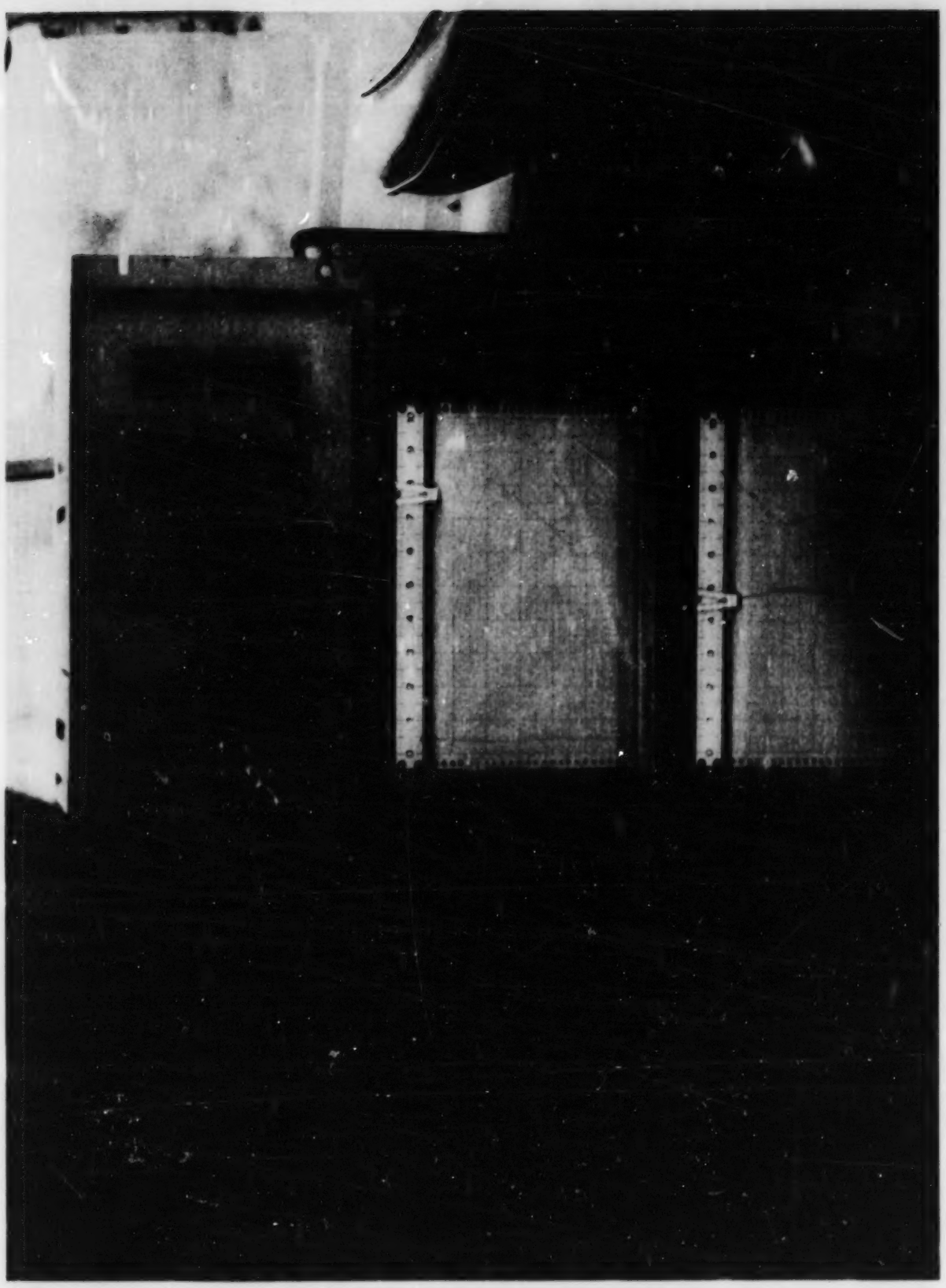


Figure 5. Interior of instrumented helicopter.

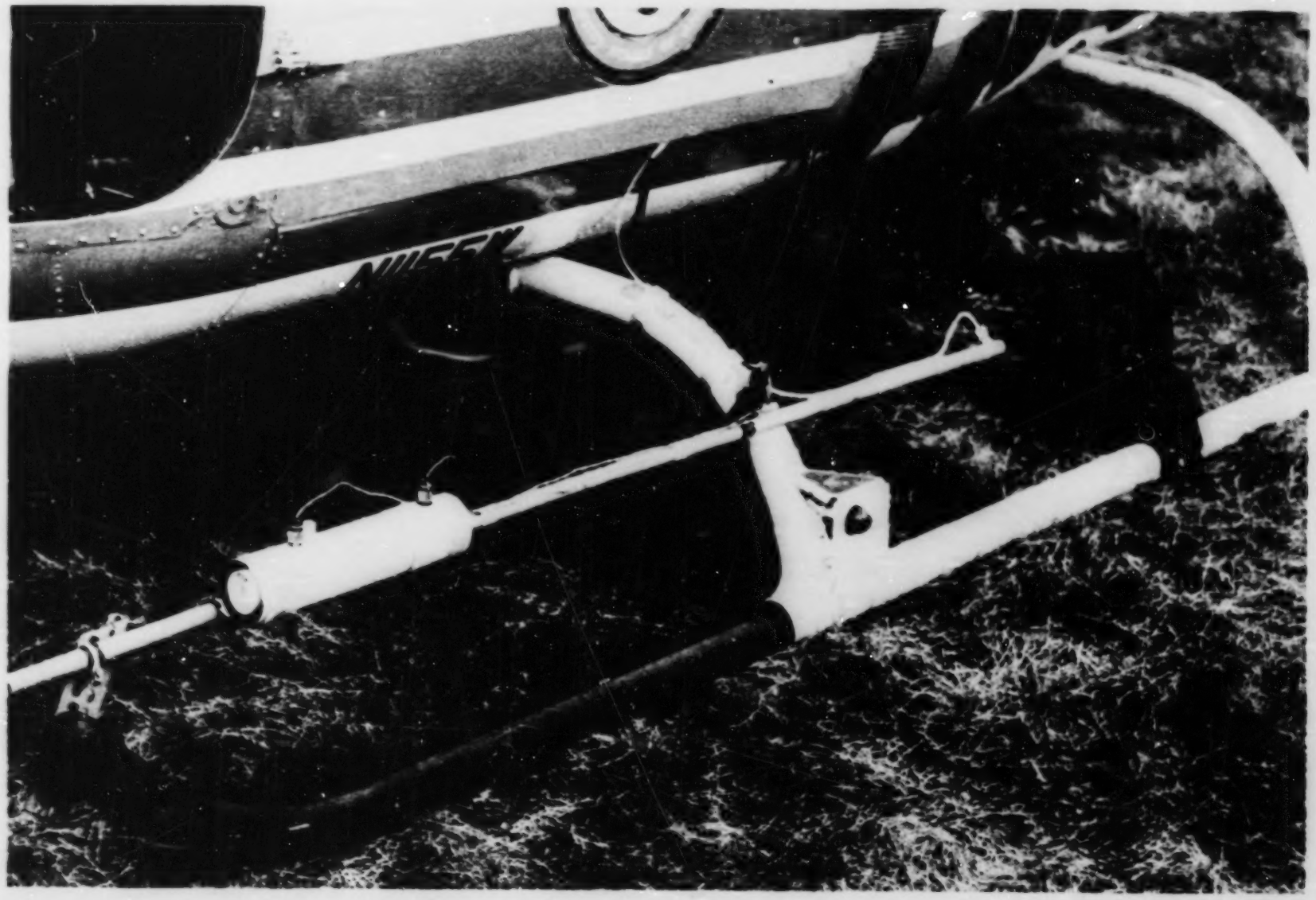


Figure 6. External helicopter probe.

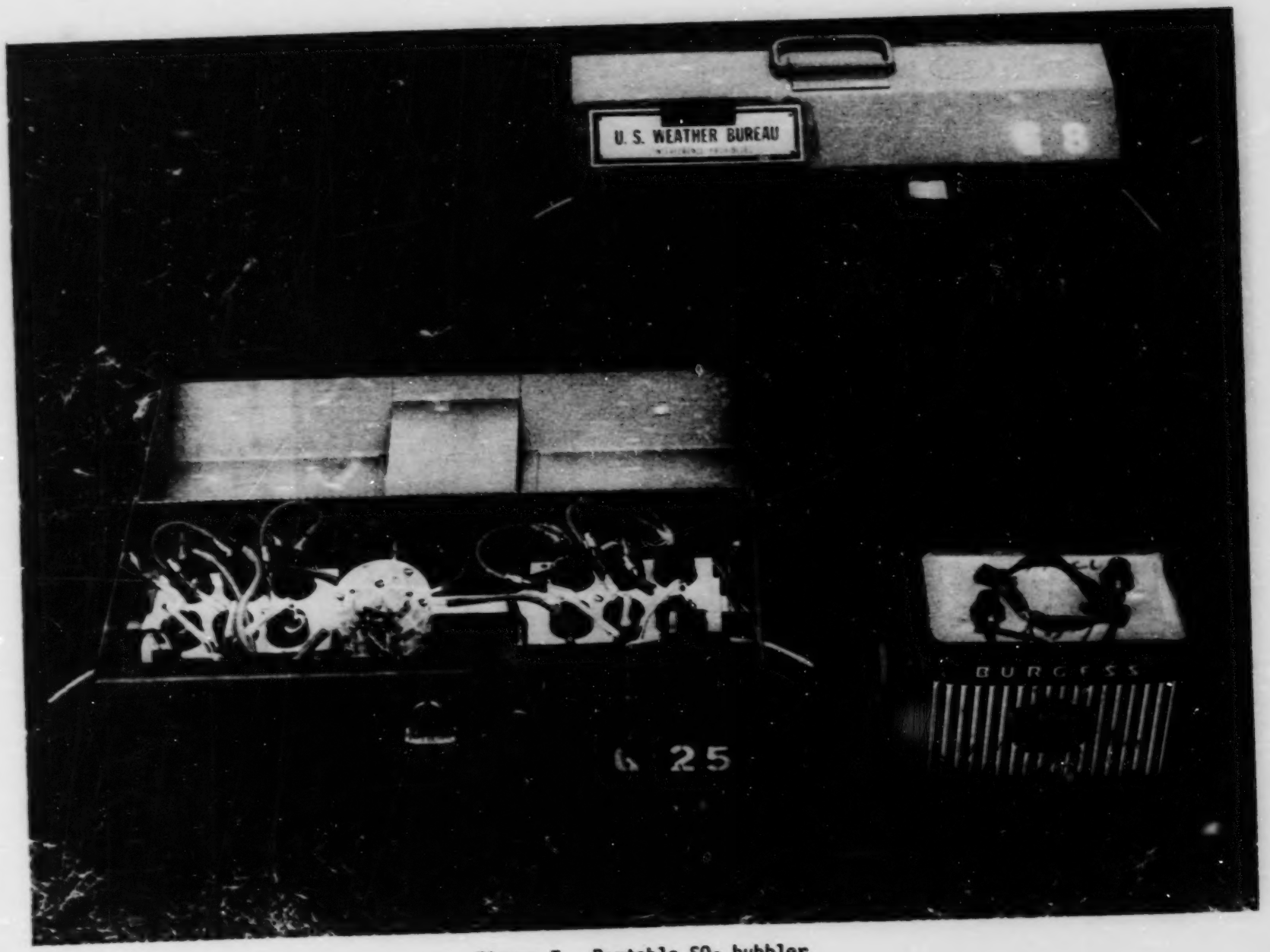


Figure 7. Portable SO_2 bubbler.

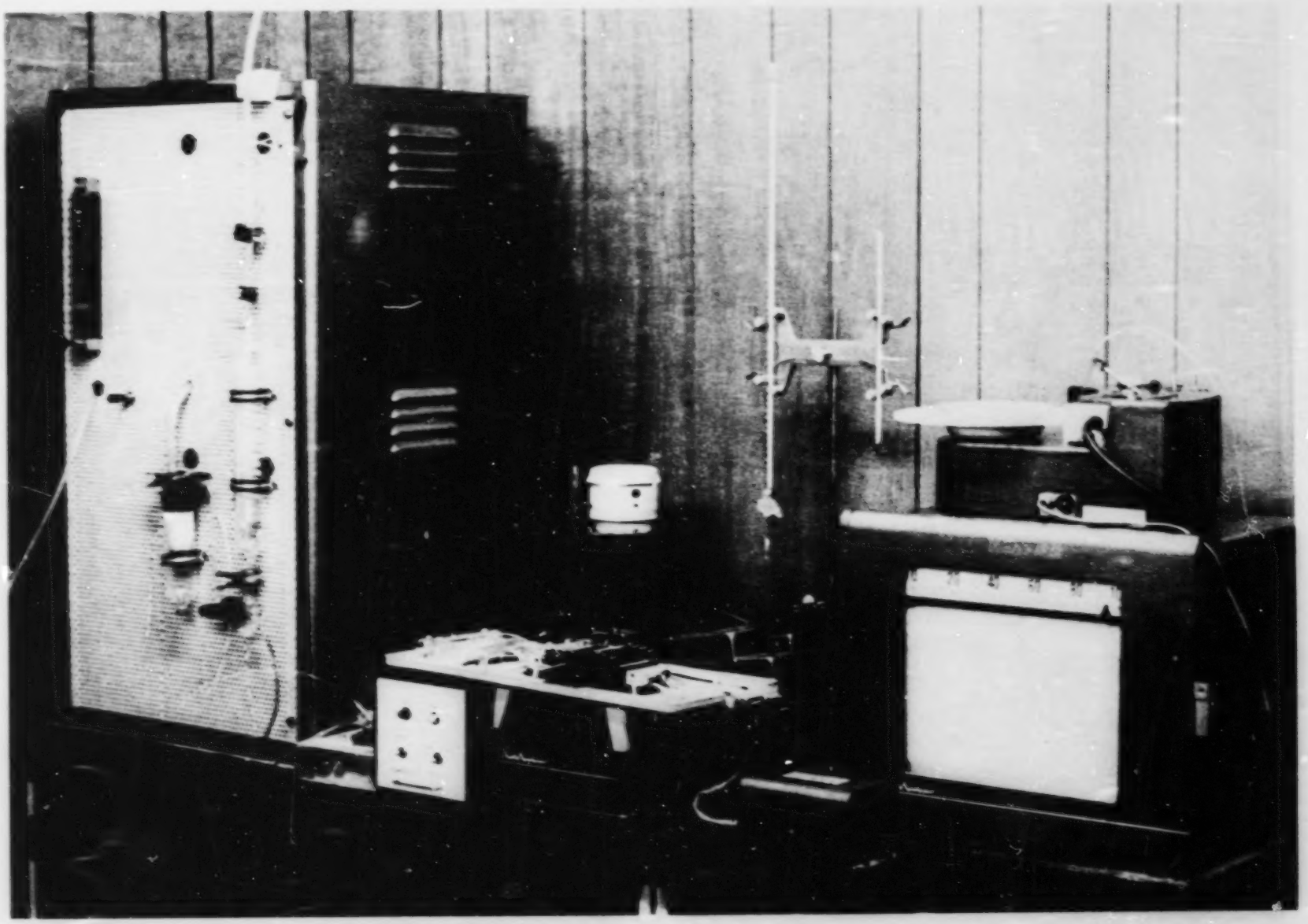


Figure 8. Technicon Autoanalyzer.

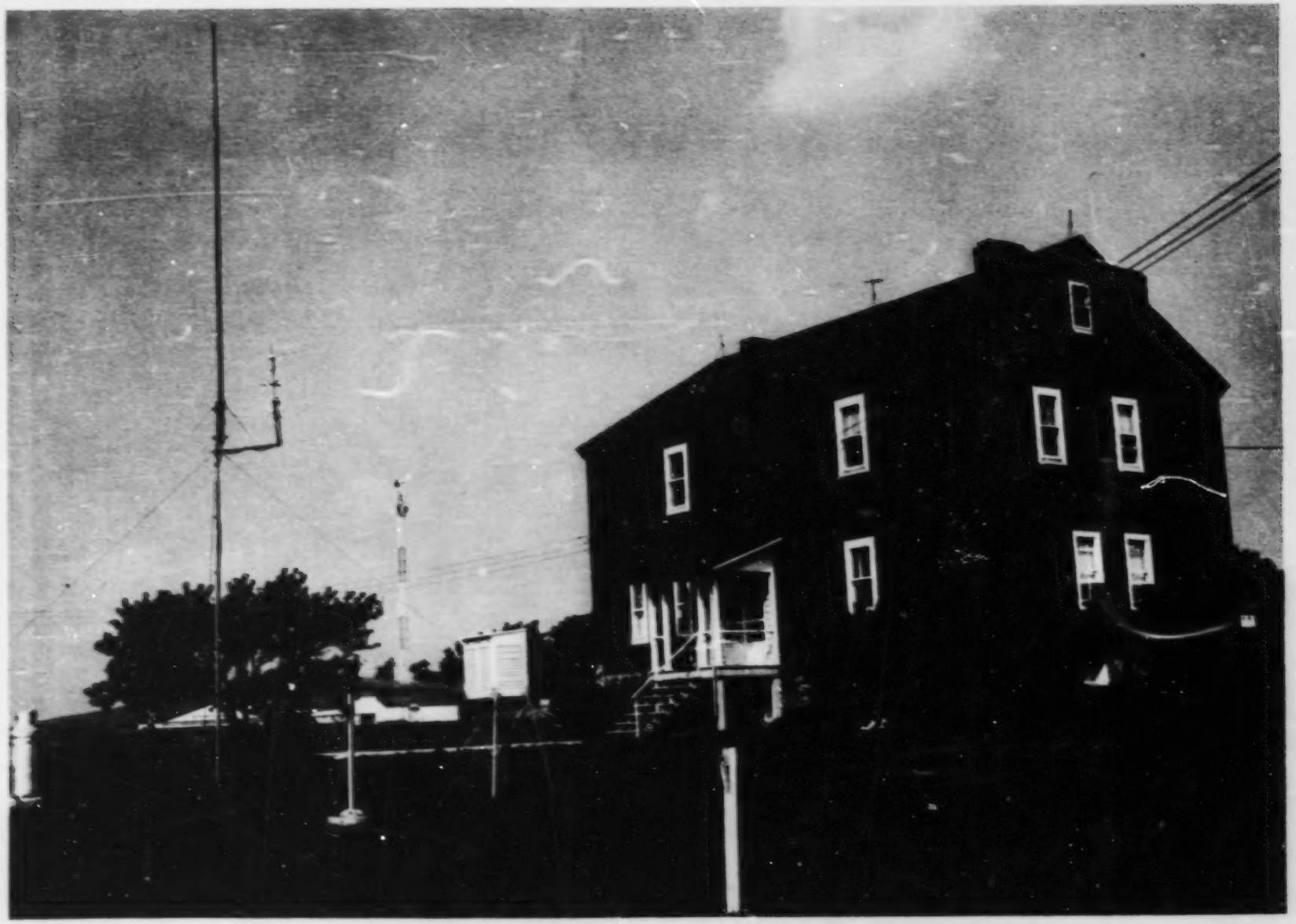


Figure 9. Surface meteorological instrumentation - Jimmy Stewart Airport.

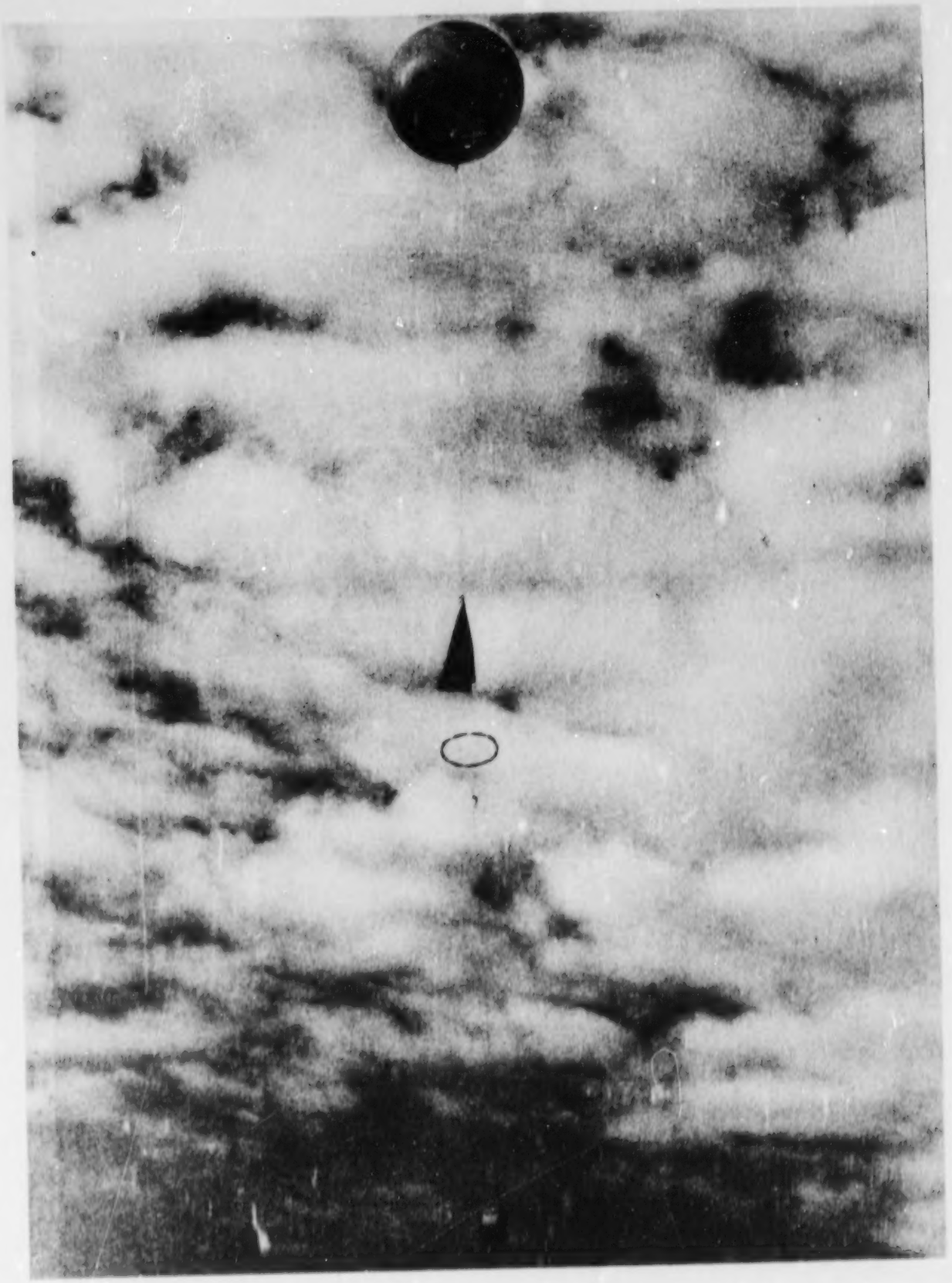


Figure 10. Radiosonde ascent.

PART 2 - DATA TABULATIONS

INTRODUCTION

Part 2 presents in tabulated form the meteorological and air quality measurements as well as the plant operational data for the four 1968 LAPPES series. Supplementary data that may assist in analysis of plume dispersion are also included. These consist of surface meteorological and SO_2 measurements taken at Jimmy Stewart Airport and surface and 500-millibar charts for each series day. An introduction to each set of tables describes the data and format and gives other pertinent information.

A summary page for each series day lists the air quality and meteorological measurements made on that day and mentions other contractors who participated. Also included are descriptions of the day's activities and the existing synoptic situation.

On certain days the LAPPES helicopter was grounded because of equipment malfunctions. Radiosondes and/or pibals that were taken in support of contractor activities on these days are also included in Part 2. In addition, a single early morning radiosonde was occasionally released on days during which weather proved too restrictive for flying; these data are also contained in the following pages.

All data are presented in metric units as the adoption of a single consistent set of units allows more direct utilization of the data. This required conversion of the following measurements: Aerovane wind speed, surface temperature, and precipitation, and all plant operational data. In these conversions, care was exercised that neither a sacrifice nor an implied gain of accuracy was effected.

Both polar and rectangular coordinate systems are utilized in this data summary. With the Keystone stacks as origin, the polar coordinates locate specific points such as cross section reference points and bubbler sites. On the other hand, right-hand rectangular coordinates are primarily used to indicate directions and have no fixed origin. The rectangular system is oriented so that plus x points downwind with plus y indicating a counterclockwise direction around the source.

DAILY EXPERIMENT SUMMARY

A summary page is presented in Table 1 for each day during 1968 on which flights were made by the LAPPES helicopter or data were collected by LAPPES contractors. Although precise plant loads are listed in Table 12, the headings in the experiment summary indicate the number of plumes emitted each day.

The summary sheets also enumerate the types of air quality and meteorological measurements collected each day. Although data from contractors' activities are not included in this volume, their participation is noted on appropriate days. Also included is a commentary in which deviations from normal experimental procedures are explained and items of relevant information are presented.

The final section of each daily summary consists of a brief description of the existing synoptic situation and the surface and 500-millibar charts from the Daily Weather Map.[11] During the March series, the 0100 EST surface chart from the same day and the 1900 EST 500-millibar chart from the previous evening are shown; the 0700 EST charts are used for each day of the remaining three series. This adjustment was necessitated by a change in publication of the Daily Weather Map.

Table 1. DAILY EXPERIMENT SUMMARY

Symbols

GLC	:	Ground-level SO_2 concentration.
Low clouds	:	Cloud base lower than 2000 meters above stack base elevation.
Middle clouds	:	Cloud base between 2000 and 6000 meters above stack base elevation.
High clouds	:	Cloud base higher than 6000 meters above stack base elevation.
Plume wind	:	Pilot balloon wind at 250 meters above stack base elevation. If pilot balloon not available, plume wind determined from radiosonde and so indicated.

Table 1. DAILY EXPERIMENT SUMMARY

March 1968 Series 14 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 10- or 16-km cross sections attempted because of dense haze; two 4-km cross sections flown to document plume continuity. Ground-level flights discontinued because of restricted visibility. Bubblers were not set out and morning radiosonde not released.

Synoptic Situation

Regional - Large high over central Appalachians dominating eastern half U.S. Surface wind light westerly. N-S 500-mb trough from eastern Hudson Bay to Florida Atlantic coast. Wind at 500 mb NW 20 meters per second (mps).

Local - Sunrise clear with dense haze. Stable with inversions to 450 meters; lapse above to 1015 meters. Plume wind WSW 5 mps. 11 AM scattered high clouds and haze. Near-neutral to 1080 meters. Plume wind SW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

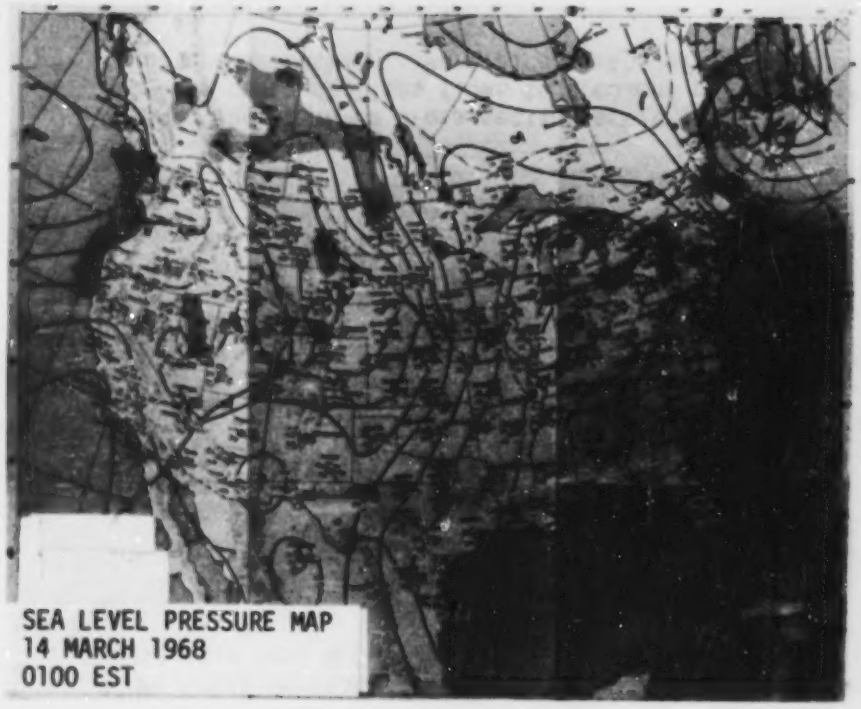


Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 15 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

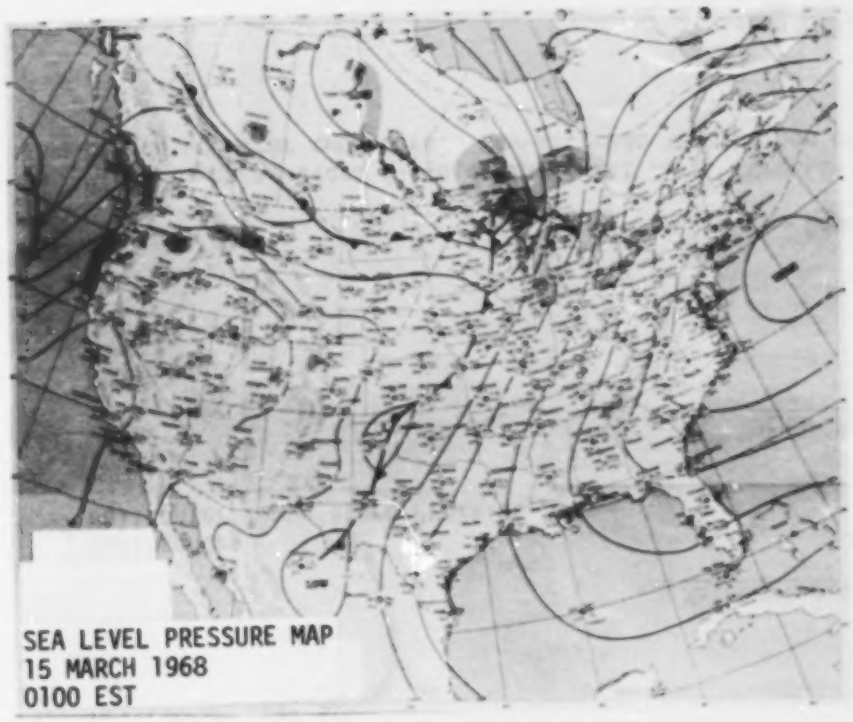
Orientation of 16-km cross section arbitrarily set at 360° because of missing reference point coordinates. Two 4-km cross sections flown to document plume continuity. Ground-level flights discontinued because of inverter malfunction. Partial coverage of GLC by bubblers.

Synoptic Situation

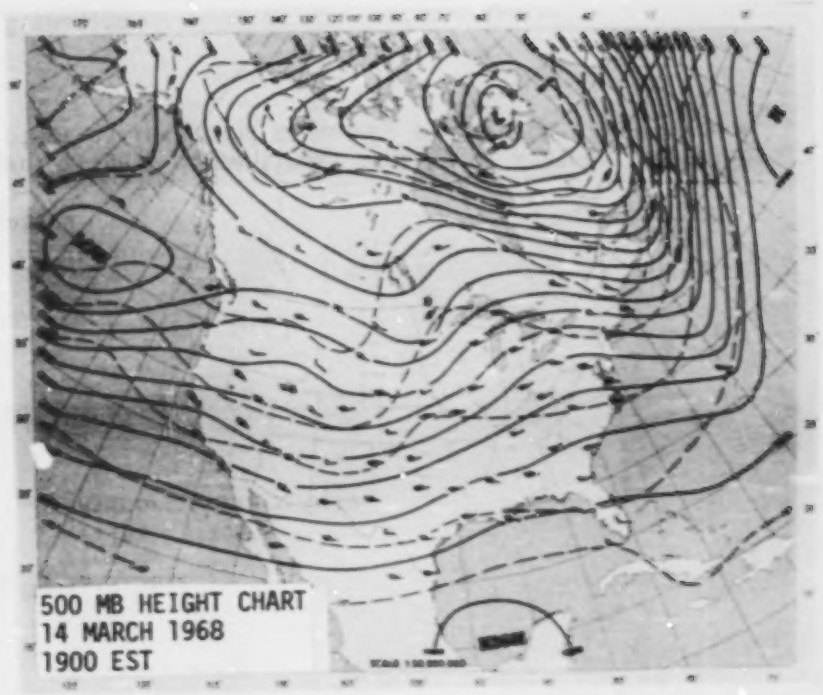
Regional - High off central Atlantic coast in advance of frontal system from Lake Superior to Texas. Surface wind light southerly. Flat 500-mb ridge over eastern U.S. Wind at 500 mb W 20 mps.

Local - Sunrise scattered middle clouds. Stable with inversions to 750 meters; lapse above to 1040 meters. Plume wind SW 9 mps. 11 AM low overcast. Neutral to 730 meters. Plume wind SW 14 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
15 MARCH 1968
0100 EST



500 MB HEIGHT CHART
14 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 16 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

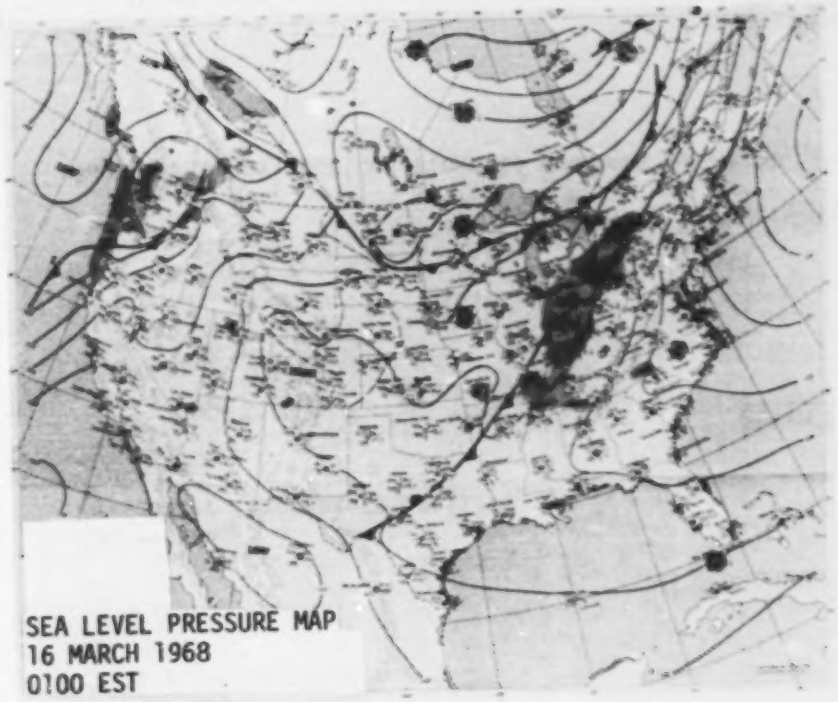
Plume cross sections flown during light rain. Ground-level flights discontinued because of weather. Bubblers picked up after two hours. Low-altitude termination of pilot-balloon runs caused by steam plume interference.

Synoptic Situation

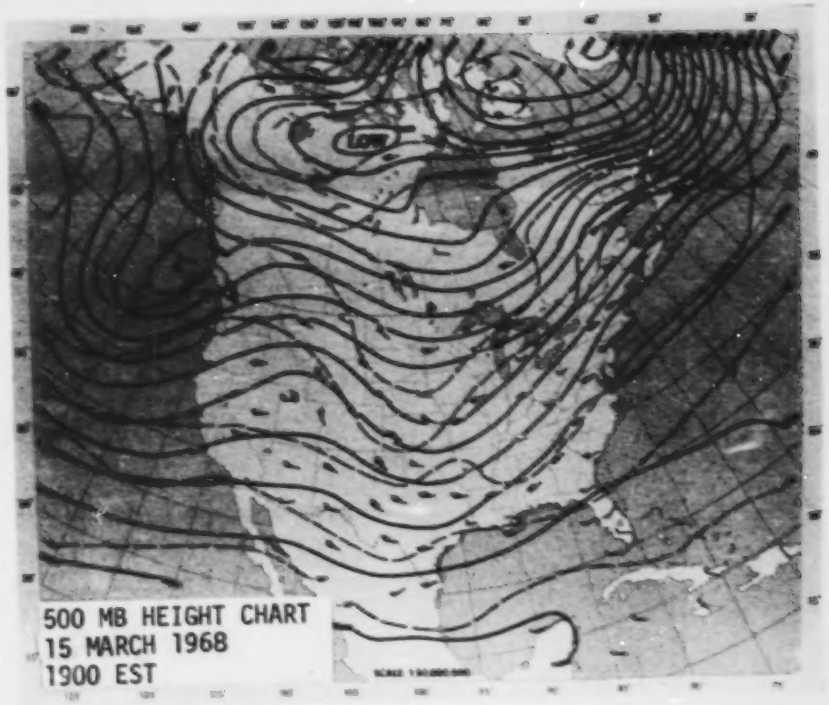
Regional - Quasi-stationary front north of St. Lawrence River to South Dakota; cold front southwestward from central Indiana to Texas. Surface wind light southeasterly. Shallow 500-mb trough over Great Plains. Wind at 500 mb SW 25 mps.

Local - Sunrise low overcast with light rain. Inversion and isothermal layers to 750 meters; lapse above to 1050 meters. Plume wind SSW 8 mps. 0830 AM low overcast with light rain. Stable with inversions to 750 meters; lapse above to 1020 meters. Plume wind S 10 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
16 MARCH 1968
0100 EST



500 MB HEIGHT CHART
15 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 18 March 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

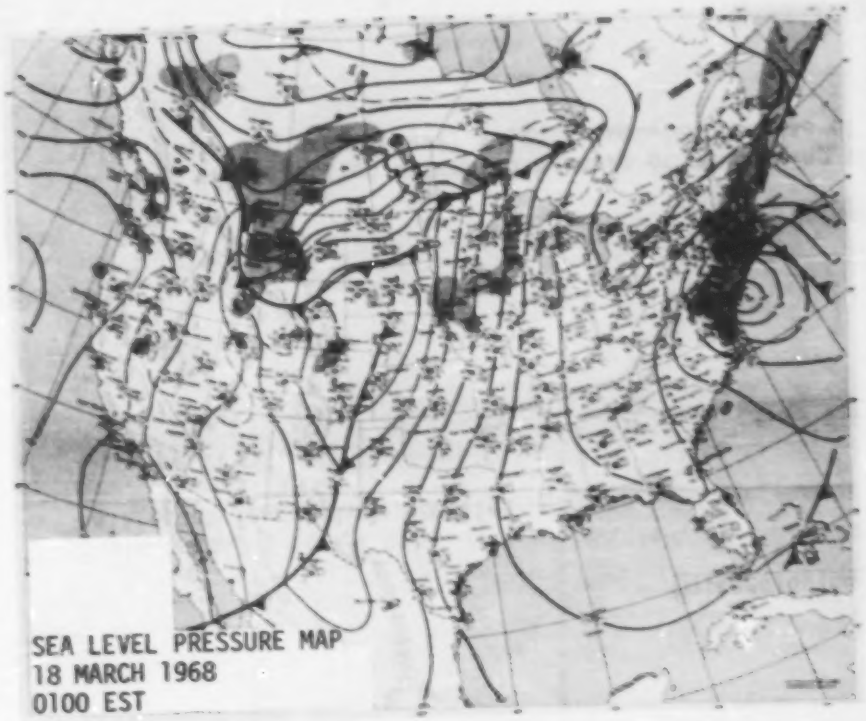
Two 4-km cross sections flown to document plume continuity. Good coverage of GLC by helicopter and bubblers.

Synoptic Situation

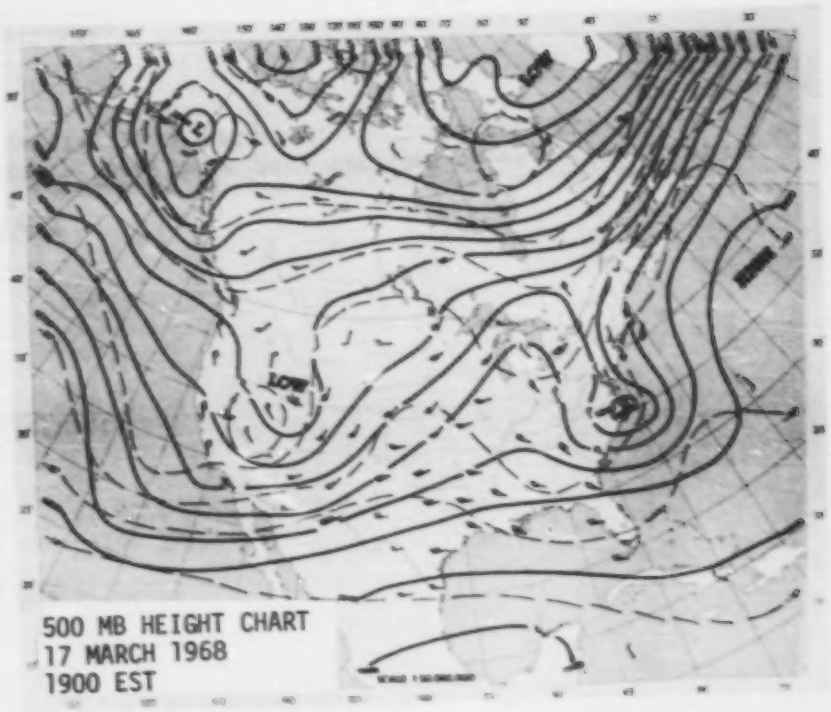
Regional - Deep low off Maryland coast; narrow N-S ridge from southern Ontario to eastern Gulf States. Surface wind light northerly. Closed 500-mb low over Hatteras; ridge from western Tennessee to Lake Huron. Wind at 500 mb N 10 mps.

Local - Sunrise clear with dense haze. Stable with inversions to 1030 meters. Plume wind NNE 6 mps. 1130 AM clear with haze. Lapse to 650 meters; stable above with inversions to 1100 meters. Plume wind NNE 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
18 MARCH 1968
0100 EST



500 MB HEIGHT CHART
17 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 19 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

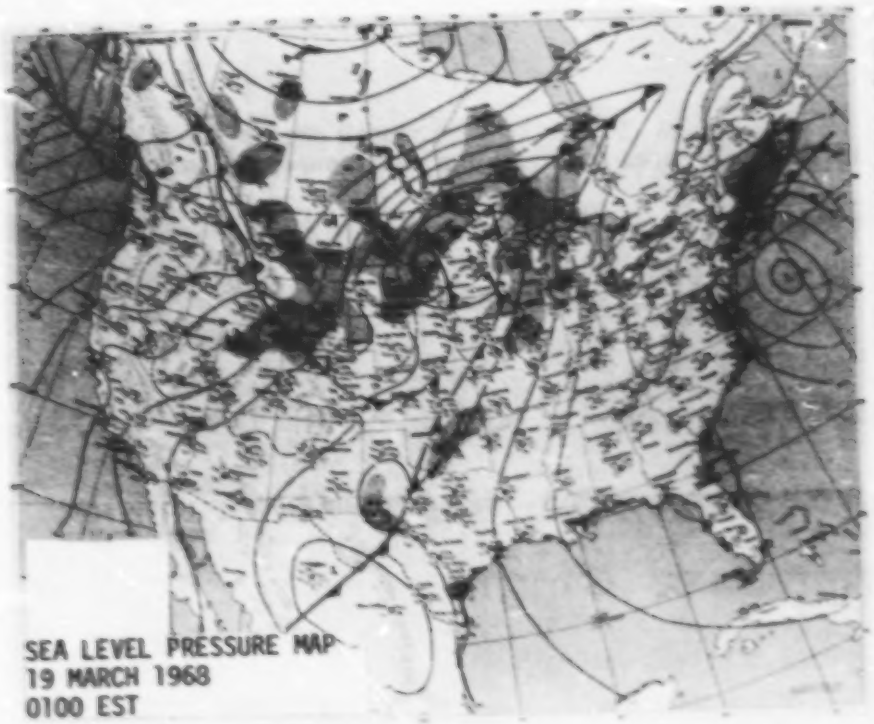
No 16-km cross section attempted because of meandering plume. Three 4-km cross sections flown to define plume shift. Minimum ground-level flights executed because of erratic plume behavior. Bubblers were not set out.

Synoptic Situation

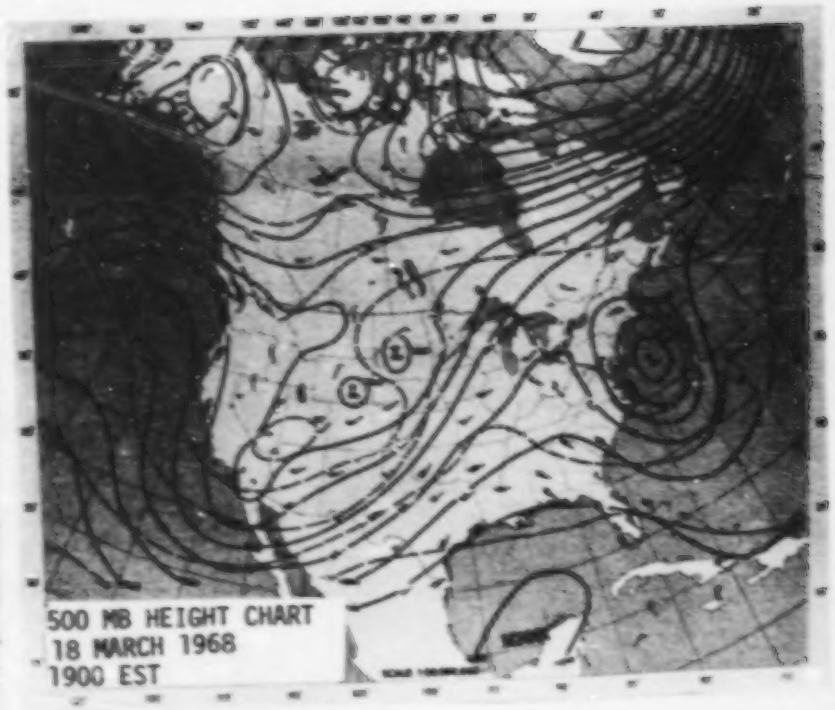
Regional - Low east of Delaware - Maryland coast; narrow N-S ridge from Georgian Bay to Georgia. Surface wind light northwesterly. Closed 500-mb low above surface low; ridge from eastern Gulf coast to Lake Erie. Wind at 500 mb NNW 15 mps.

Local - Sunrise scattered high clouds with haze. Stable with inversions to 1050 meters. Plume wind SW 1 mps. Noon broken high clouds with haze. Near-neutral to 400 meters; stable above with inversions to 1060 meters. Plume wind SW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
19 MARCH 1968
0100 EST



500 MB HEIGHT CHART
18 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 20 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Plume cross sections flown during light rain. Ground-level flights discontinued because of weather. Bubblers picked up after two hours.

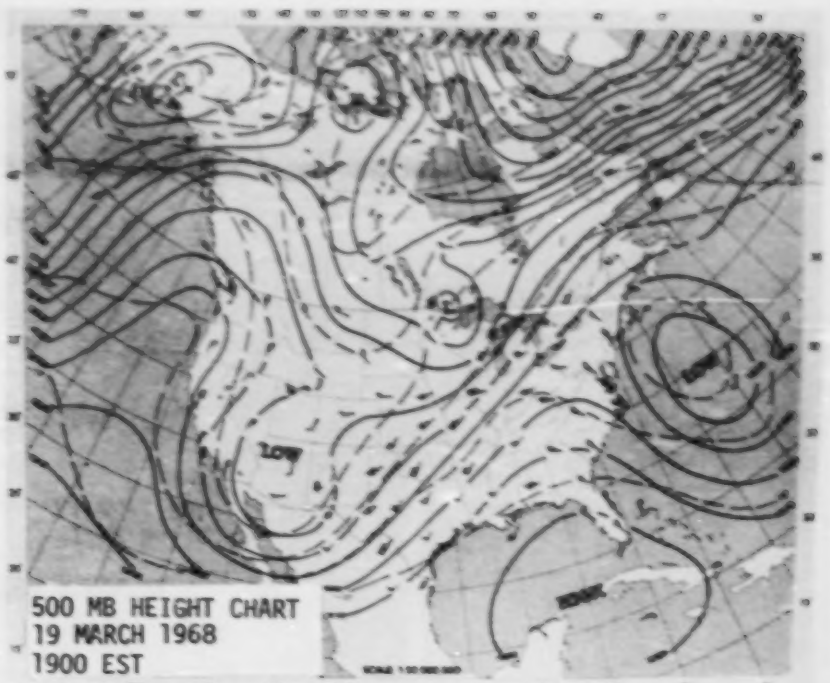
Synoptic Situation

Regional - Narrow ridge along Atlantic coast; cold front from Sault Ste Marie through western Indiana to eastern Texas. Surface wind light southerly. 500-mb high over western Cuba with ridge northward to Pennsylvania. Wind at 500 mb WNW 10 mps.

Local - Sunrise low overcast with light rain. Inversions to 250 meters and 600-625 meters; lapse between. Plume wind E 7 mps. 0830 AM low overcast with light rain. Stable with inversions to 550 meters; lapse above to 1010 meters. Plume wind E 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
20 MARCH 1968
0100 EST



500 MB HEIGHT CHART
19 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 25 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

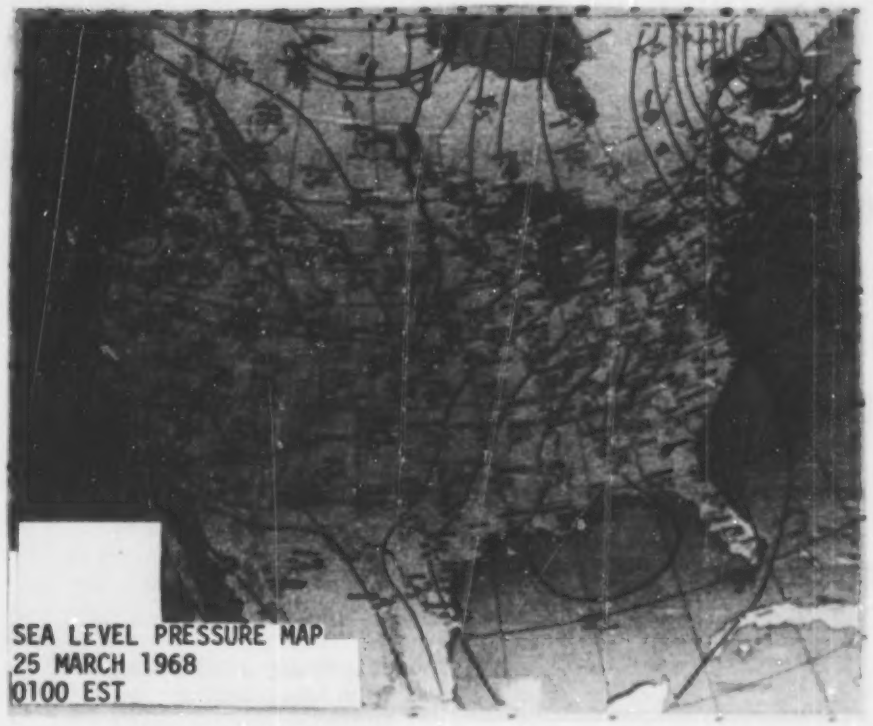
Two 4-km cross sections flown to document plume continuity. Good coverage of GLC by helicopter and bubblers.

Synoptic Situation

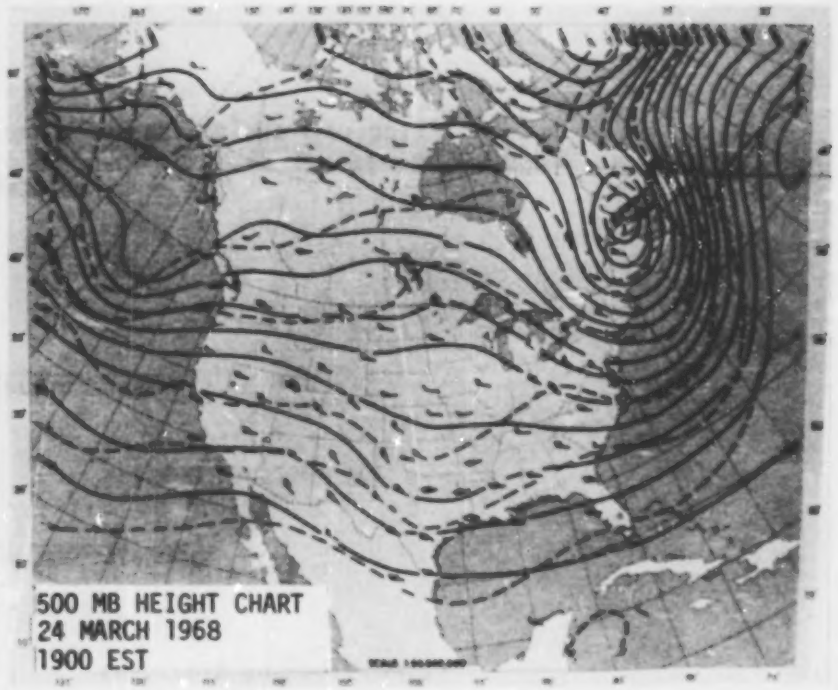
Regional - High over central Gulf coast with ridge northeastward to Lake Ontario. Surface wind light and variable. Closed 500-mb low over mouth of St. Lawrence River with near-zonal flow over entire U.S. Wind at 500 mb NW 25 mps.

Local - Sunrise scattered high clouds with dense haze. Stable with inversions to 425 meters and 850-1035 meters; lapse between. Plume wind SSW 9 mps. 02 PM clear with haze. Neutral to 1035 meters. Plume wind SW 12 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
25 MARCH 1968
0100 EST



500 MB HEIGHT CHART
24 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 26 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Good coverage of GLC by helicopter and bubblers. Afternoon radiosonde not available.

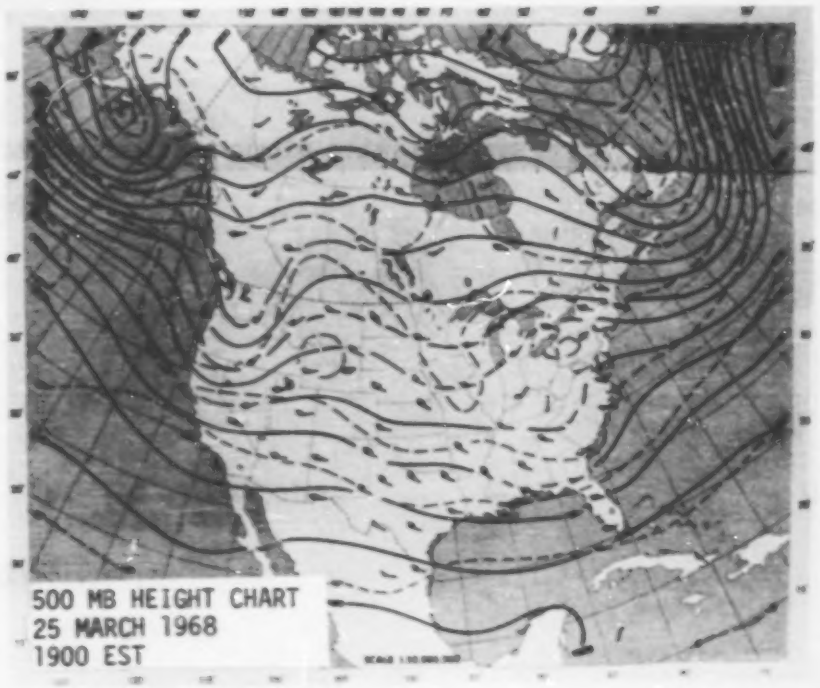
Synoptic Situation

Regional - High off Atlantic coast with ridge southwestward to central Gulf of Mexico. Surface wind light southerly. 500-mb short waves over northern U.S.; zonal flow over southern U.S. Wind at 500 mb SW 5 mps.

Local - Sunrise middle overcast. Surface inversion to 450 meters; lapse above to 1050 meters. Plume wind SSW 10 mps. Noon broken middle clouds. Neutral to 900 meters. Plume wind SW 5 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
26 MARCH 1968
0100 EST



500 MB HEIGHT CHART
25 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 27 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

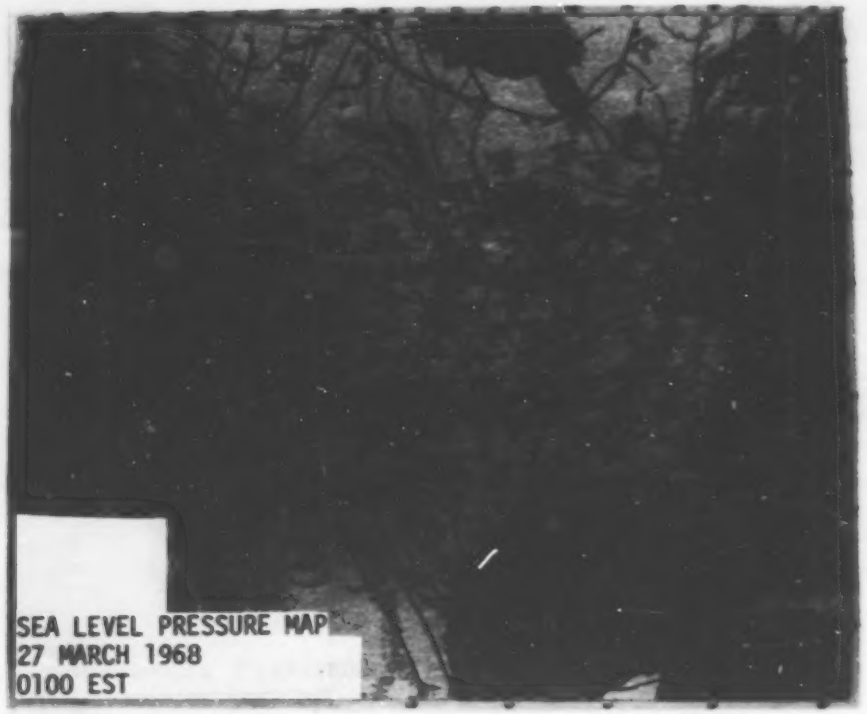
Good coverage of GLC by helicopter and bubblers. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Developing warm front from central Minnesota to northern Virginia. Surface wind SW 5 mps. 500-mb short wave trough from James Bay to western Pennsylvania; ridge from Winnipeg to lower Ohio Valley. Wind at 500 mb W 20 mps.

Local - Sunrise broken low clouds with dense haze and ground fog. Surface inversion to 500 meters; lapse above to 1000 meters. Plume wind W 9 mps. 11 AM broken low clouds with haze. Stable layers 650-900 meters; near-neutral below and above to 1045 meters. Plume wind NW 5 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



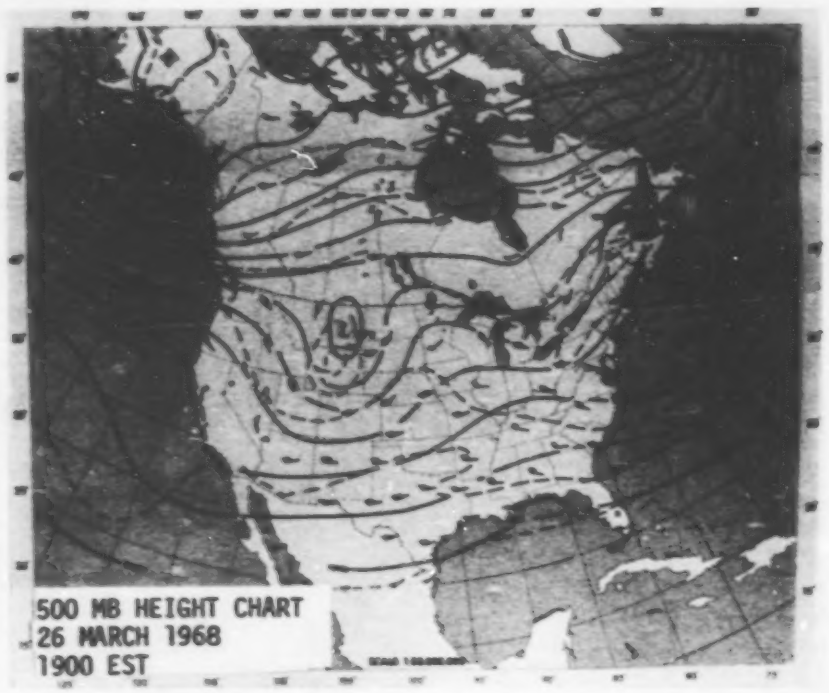


Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 28 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Partial coverage of GLC by helicopter and bubblers. Ground-level flights discontinued because of strong low-level turbulence. Bubblers picked up after two hours because of plume shift.

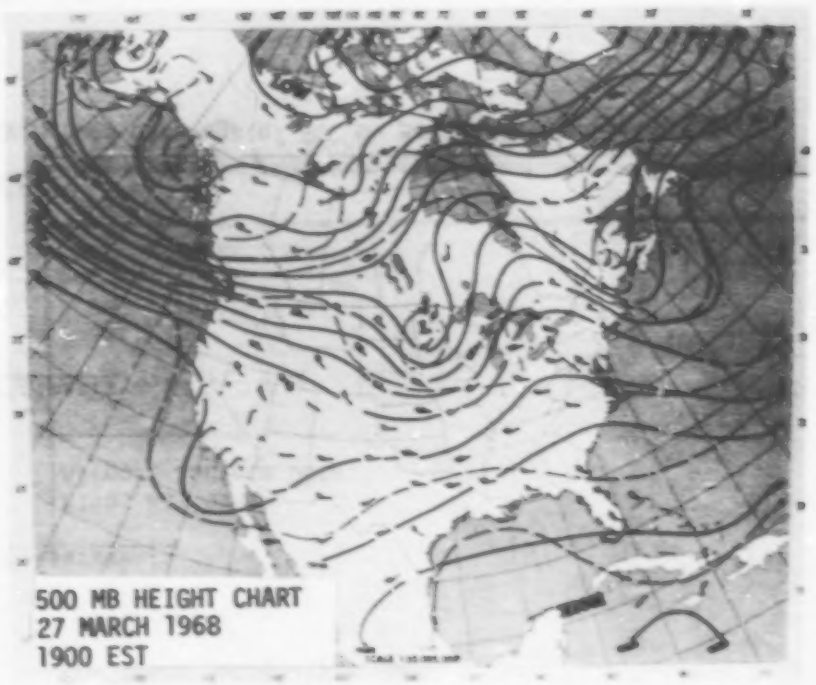
Synoptic Situation

Regional - High off Carolina coast; weak frontal trough from Lake Superior to western Texas. Surface wind light southerly. 500-mb ridge from West Virginia to James Bay; associated troughs over Minnesota and Maine. Wind at 500 mb WNW 12 mps.

Local - Sunrise middle overcast with haze. Surface inversion to 350 meters; lapse above to 1065 meters. Plume wind SW 9 mps. 11 AM low overcast. Neutral to 1030 meters. Plume wind SW 8 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
28 MARCH 1968
0100 EST



500 MB HEIGHT CHART
27 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 29 March 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Two 4-km cross sections flown to document plume continuity. Good coverage of GLC by helicopter and bubblers.

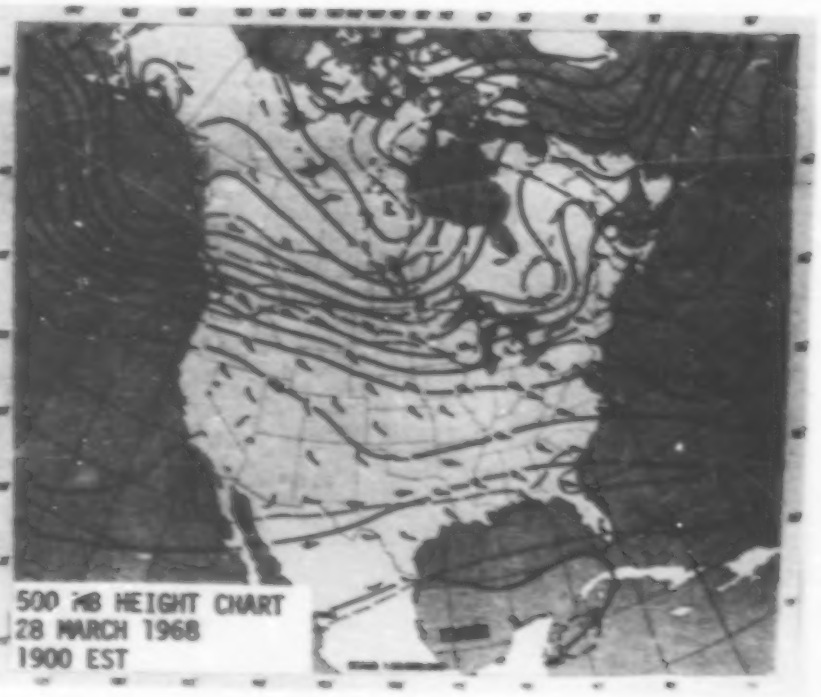
Synoptic Situation

Regional - E-W ridge along Gulf coast. Weak frontal trough from Sault Ste Marie to northern Nebraska; warm front from Hudson Bay to New Jersey. Surface wind light southwesterly. Zonal 500-mb flow over U.S. with jet along northern border. Wind at 500 mb WNW 20 mps.

Local - Sunrise scattered high clouds with haze. Stable with inversions to 700 meters; lapse above to 1040 meters. Plume wind SW 8 mps. 11 AM scattered to broken low clouds. Neutral to 880 meters. Plume wind SW 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
29 MARCH 1968
0100 EST



500 MB HEIGHT CHART
28 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 30 March 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Good coverage of GLC by helicopter and bubblers.

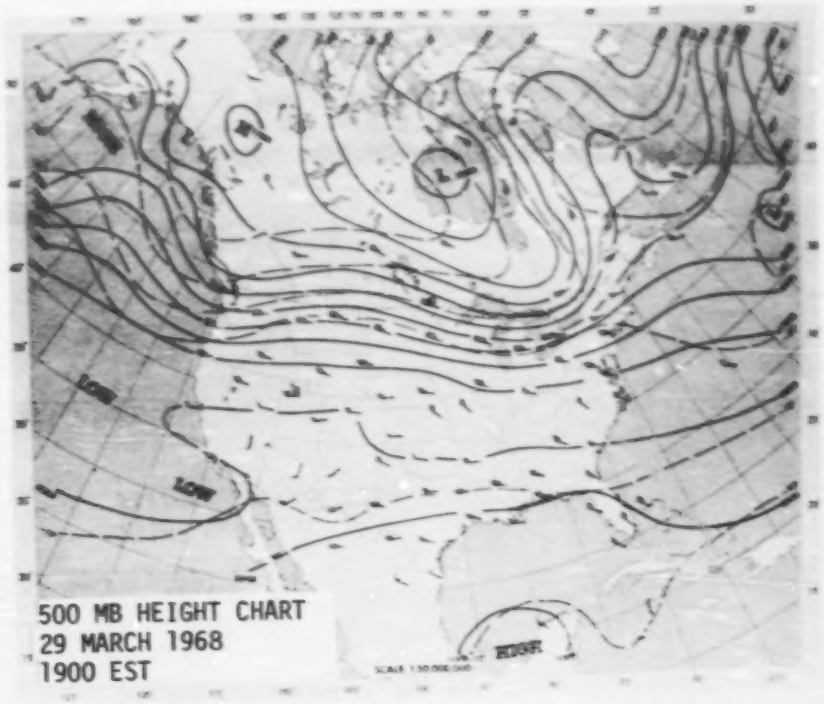
Synoptic Situation

Regional - High pressure over eastern U.S. with centers over southern Lake Michigan and western Florida. Weak frontal trough from New Jersey to northern Kansas. Surface wind N 5 mps. Zonal 500-mb flow over U.S. with jet along northern border. Wind at 500 mb WNW 25 mps.

Local - Sunrise clear. Surface inversion to 280 meters; lapse above to 1040 meters. Plume wind WSW 1 mps. 1130 AM clear. Near-neutral to 1060 meters. Plume wind N 1 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
30 MARCH 1968
0100 EST



500 MB HEIGHT CHART
29 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 1 April 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted to allow more time to measure GLC. Good coverage of GLC by helicopter; partial coverage by bubblers. Ground-level flights discontinued because of strong low-level turbulence. Afternoon radiosonde not available. Low-altitude termination of first few pilot balloon runs caused by steam plume interference.

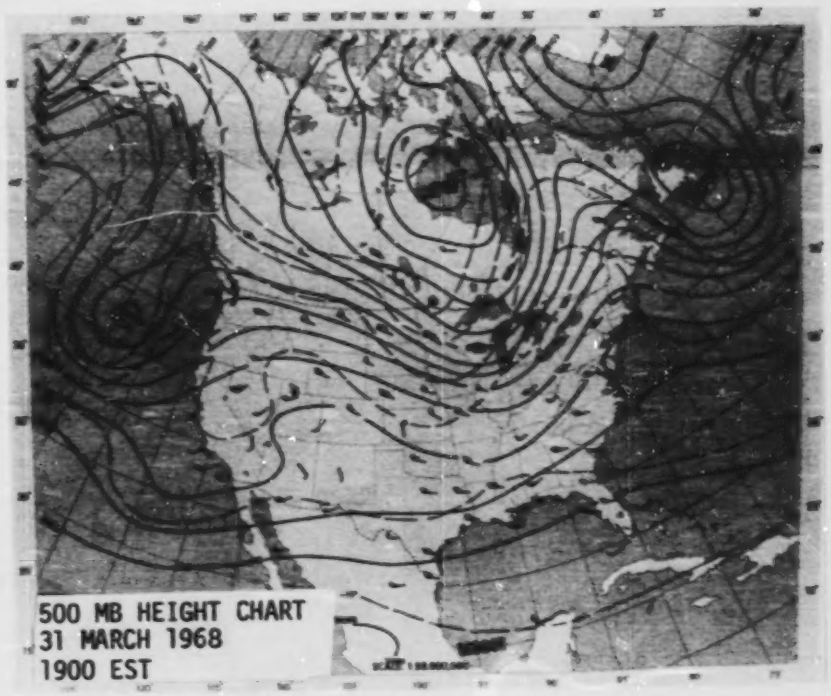
Synoptic Situation

Regional - Frontal trough from central Quebec through Pennsylvania to Alabama. High over western Iowa. Surface wind NNW 7 mps. Closed 500-mb low over western Hudson Bay with trough to southern Illinois. N-S ridge over New England. Wind at 500 mb SW 20 mps.

Local - Sunrise low overcast after rain. Inversion and isothermal to 100 meters and 850-1130 meters; near-neutral between. Plume wind N 12 mps. 1230 PM scattered low clouds. Neutral to 1050 meters. Plume wind NW 12 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
1 APRIL 1968
0100 EST



500 MB HEIGHT CHART
31 MARCH 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 2 April 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Extremely wide plume. No 16-km cross section attempted because of SO_2 analyzer malfunction. Ground-level flights terminated early for same reason. Good coverage of GLC by bubblers. Afternoon radiosonde not released.

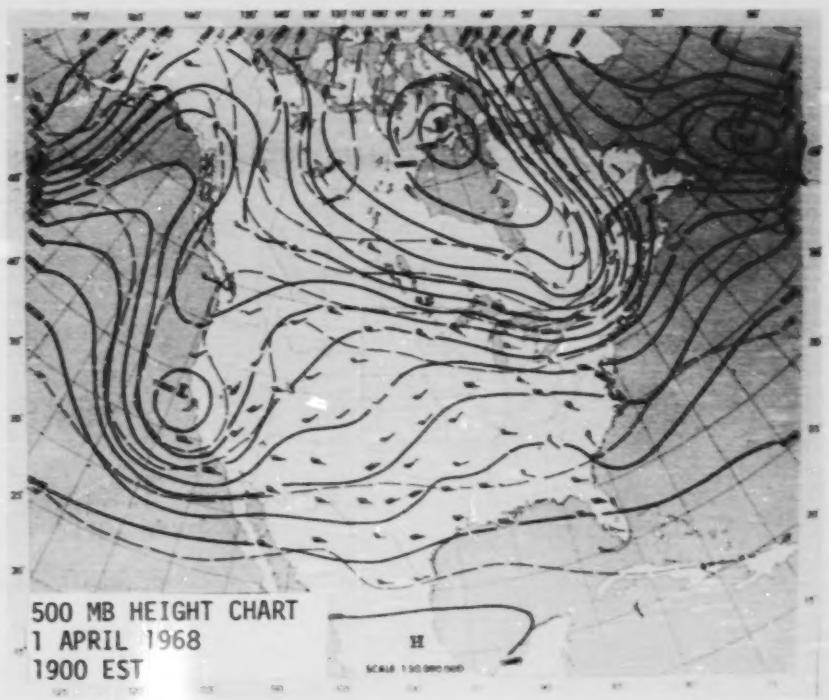
Synoptic Situation

Regional - High centered over western Pennsylvania dominating eastern U.S. Surface wind calm. Near-zonal 500-mb flow over northeastern U.S. with jet over Great Lakes. Wind at 500 mb WNW 25 mps.

Local - Sunrise clear with dense haze. Surface inversion to 450 meters; lapse above to 1000 meters. Plume wind SSW 6 mps. 09 AM clear with haze. Surface inversion to 400 meters; lapse above to 730 meters. Plume wind SW 9 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
2 APRIL 1968
0100 EST



500 MB HEIGHT CHART
1 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 3 April 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

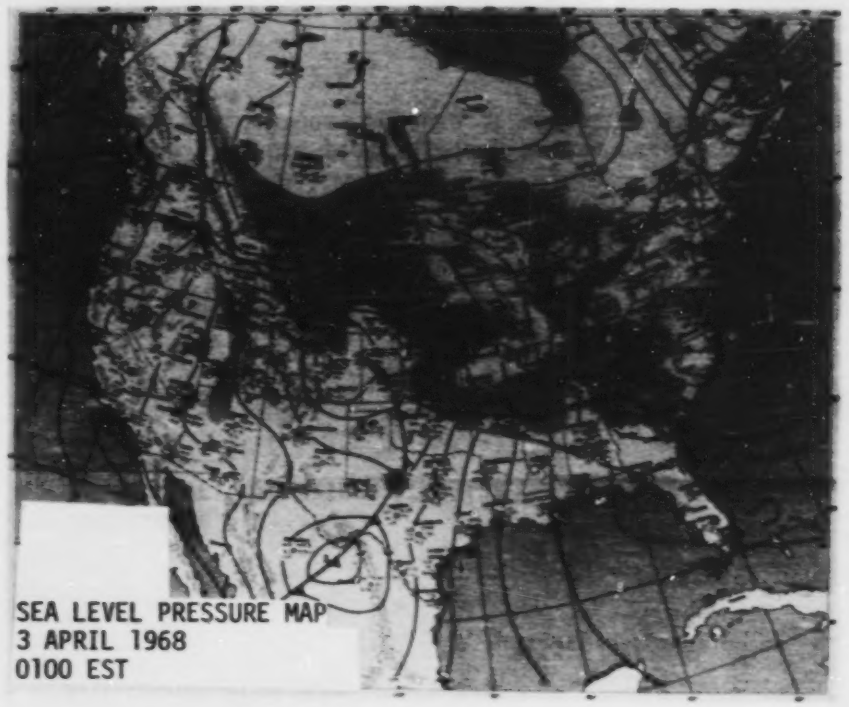
Good coverage of GLC by helicopter; partial coverage by bubblers caused by wind shift.

Synoptic Situation

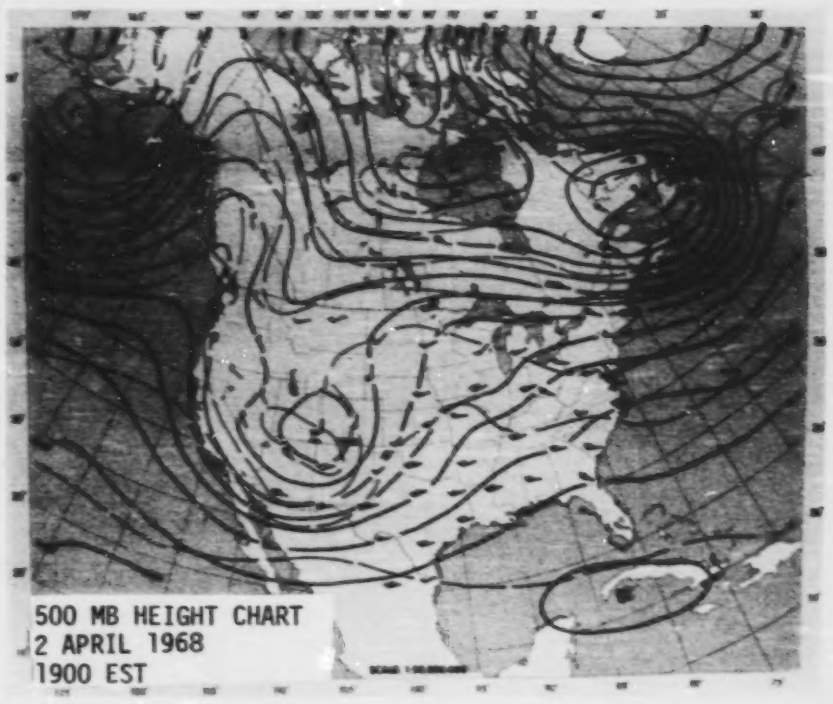
Regional - High off Virginia Capes. Low over eastern Colorado with stationary front through Wisconsin to southern Ohio. Surface wind light southeasterly. Near-zonal 500-mb flow over eastern U.S. Wind at 500 mb WNW 12 mps.

Local - Sunrise low broken, high overcast. Surface inversion to 400 meters; lapse above to 1060 meters. Plume wind ESE 4 mps. Noon low and middle broken clouds. Neutral to 1000 meters; stable above to 1100 meters. Plume wind SSW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
3 APRIL 1968
0100 EST



500 MB HEIGHT CHART
2 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 4 April 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Airport Surface Data

Other Participants

None

Commentary

Second 4-km cross section flown during heavy rain; 10-km cross section flown during light rain. Ground-level flights discontinued because of weather. Bubblers were not set out. Pilot balloons and afternoon radiosonde not released.

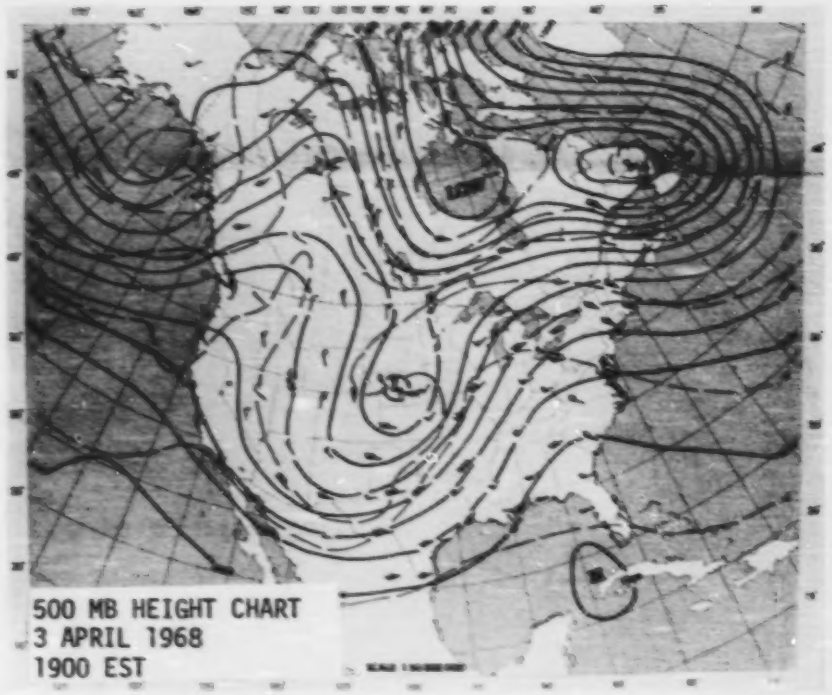
Synoptic Situation

Regional - Low over southeastern Minnesota with successive fronts covering quadrant southeast of low. Surface wind SSE 5 mps. Closed 500-mb low over Nebraska; weak ridge from Florida to southern Quebec. Wind at 500 mb W 20 mps.

Local - Sunrise low overcast with intermittent rain. Slight inversion 900-950 meters; lapse below and above to 1060 meters. Plume wind (from radiosonde) S 6 mps. 0830 AM low overcast with moderate rain. Lapse to 500 meters; stable above to 770 meters. Plume wind not available.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
4 APRIL 1968
0100 EST



500 MB HEIGHT CHART
3 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 10 April 1968 Keystone Valley

SO_2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Helicopter Temperature Profiles

Airport Surface Data

Other Participants

None

Commentary

Keystone Plant not in operation. Successive temperature profiles flown in valley surrounding Keystone to document inversion breakup. No radiosondes or pilot balloons released.

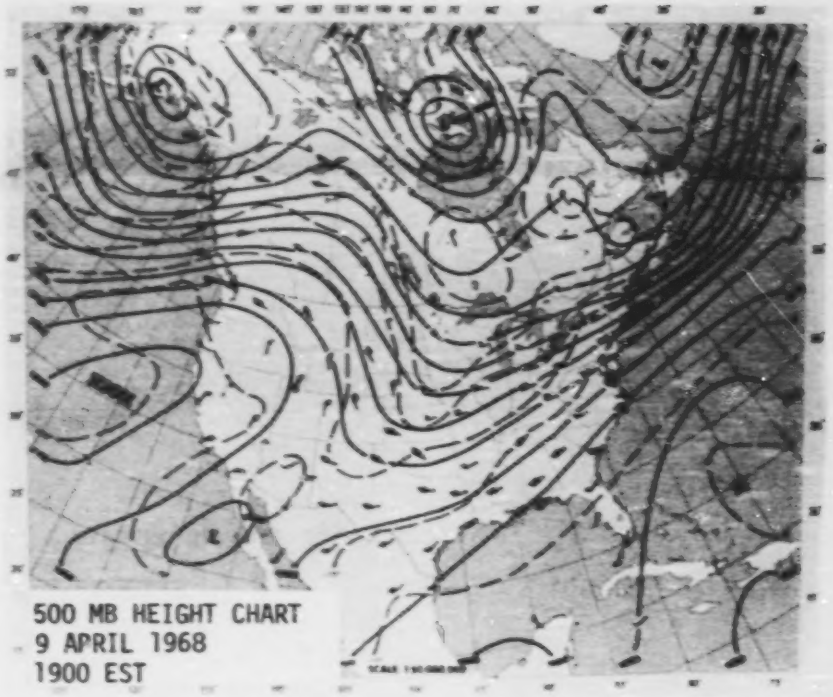
Synoptic Situation

Regional - Flat gradient over eastern U.S. with high over southern Ohio; stationary front from southern Texas to Carolina coast. Surface wind near calm. Near-zonal flow over northeastern U.S. with jet over Pennsylvania. Wind at 500 mb W 35 mps.

Local - Sunrise broken middle clouds. Stable with inversions to 700 meters; lapse above to 1350 meters. 1030 AM scattered middle clouds. Near-neutral to 1380 meters. Winds aloft and airport surface winds not available.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
10 APRIL 1968
0100 EST



500 MB HEIGHT CHART
9 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 11 April 1968 Keystone Valley

SO_2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Helicopter Temperature Profiles

Airport Surface Data

Other Participants

None

Commentary

Keystone Plant not in operation. Successive temperature profiles flown in valley surrounding Keystone to document inversion breakup. No radiosondes or pilot balloons released.

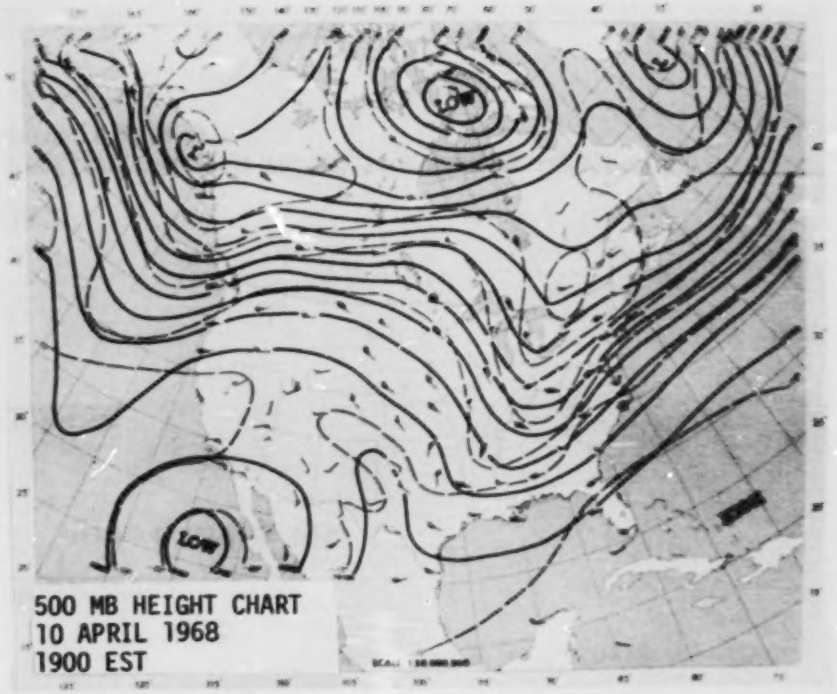
Synoptic Situation

Regional - Flat ridge from Texas to northern Quebec. Stationary front from low off Carolina coast to Gulf of Mexico. Surface wind light northwesterly. 500-mb trough from central Quebec to Texas coast. Wind at 500 mb WSW 12 mps.

Local - Sunrise scattered high clouds. Stable with inversions to 350 meters and 1100-1370 meters; lapse between. 0930 AM broken low clouds. Slight inversion 600-610 meters; lapse below and above to inversion at 1070 meters. Winds aloft not available; airport surface winds listed in Table 2.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
11 APRIL 1968
0100 EST



500 MB HEIGHT CHART
10 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

March 1968 Series 12 April 1968 Keystone Valley

SO2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Helicopter Temperature Profiles

Airport Surface Data

Other Participants

None

Commentary

Keystone Plant not in operation. Successive temperature profiles flown in valley surrounding Keystone to document inversion breakup. No radiosondes or pilot balloons released.

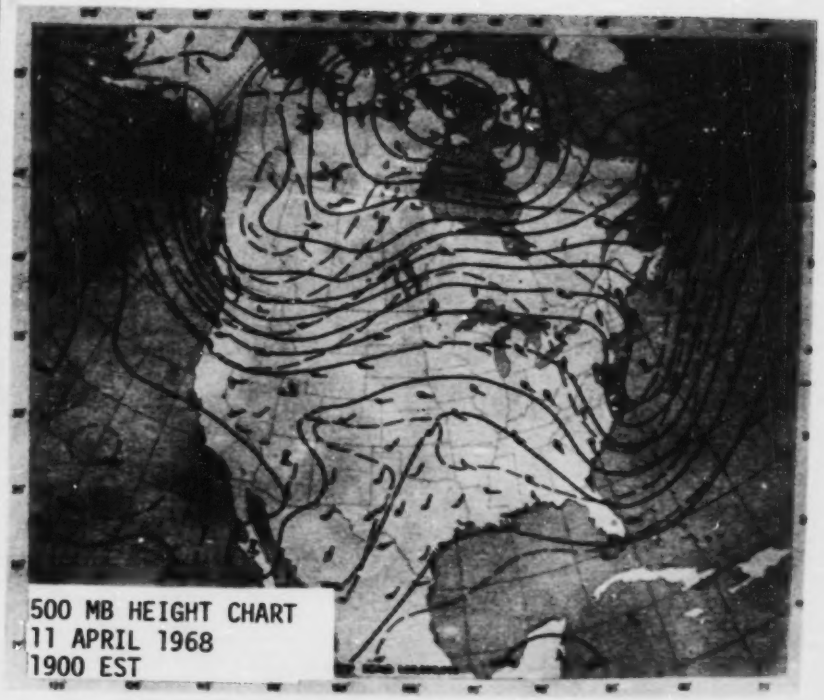
Synoptic Situation

Regional - High over Carolinas with ridge northeast to Maine coast. Warm front from northern Minnesota to southern Lake Michigan. Surface wind calm. 500-mb trough along Atlantic coast; ridge from New England southwest to Mississippi Valley. Wind at 500 mb N 15 mps.

Local - Sunrise clear. Stable with inversions to 450 meters and 1000-1350 meters; lapse between. 10 AM clear. Near-neutral to 700 meters; stable above with inversions to 1300 meters. Winds aloft not available; airport surface winds listed in Table 2.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
12 APRIL 1968
0100 EST



500 MB HEIGHT CHART
11 APRIL 1968
1900 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 5 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Plume cross sections flown during intermittent light rain. Two 4-km cross sections flown to document plume continuity. Ground-level flights discontinued because of weather. Bubblers were not set out.

Synoptic Situation

Regional - Flat high centered over upper Mississippi Valley extending eastward to frontal trough off Carolina coast. Surface wind N 5 mps. 500-mb low over western Quebec with trough southwestward to Missouri. Wind at 500 mb WSW 18 mps.

Local - Sunrise low overcast with intermittent light rain and fog. Stable with inversions to 1050 meters. Plume wind ENE 6 mps. 10 AM low overcast with intermittent light rain and fog. Near-neutral to 580 meters. Plume wind NE 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

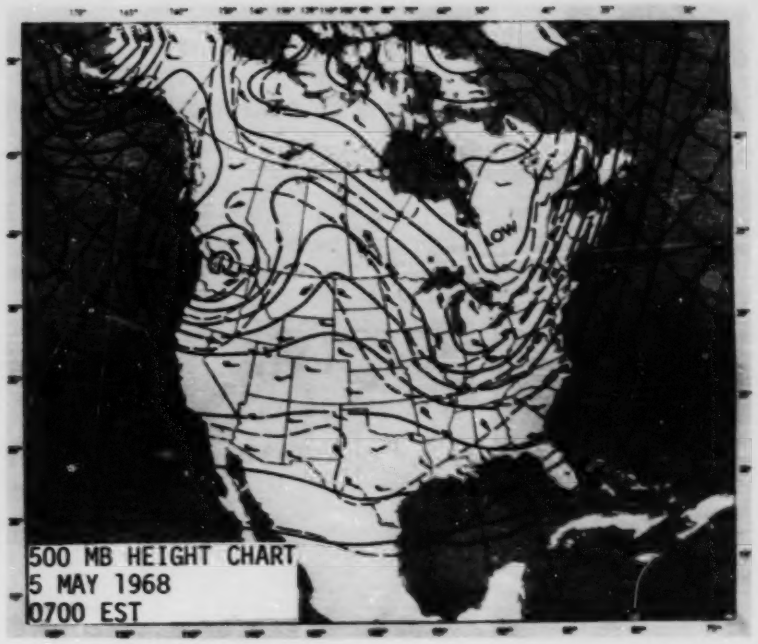


Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 6 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted because of extreme plume width. Partial coverage of GLC by helicopter and bubblers.

Synoptic Situation

Regional - High centered over upper Great Lakes dominating eastern U.S. Surface wind light northwesterly. Closed 500-mb low over central Quebec with trough southward. Wind at 500 mb NW 18 mps.

Local - Sunrise clear. Stable with inversions to 500 meters; lapse above to 1040 meters. Plume wind NNW 7 mps. 10 AM scattered high clouds. Near-neutral to 1080 meters. Plume wind N 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

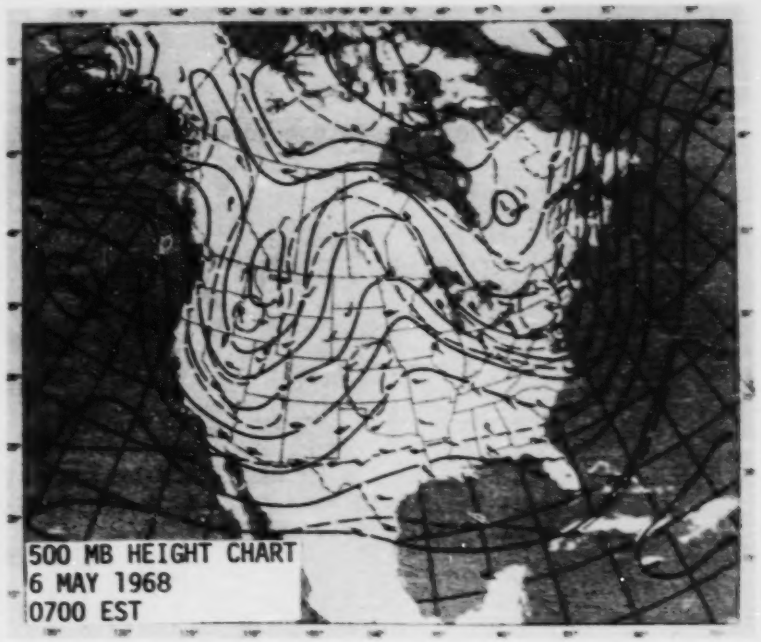


Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 7 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Brookhaven National Laboratory (plume isotopic ratio measurements)

Commentary

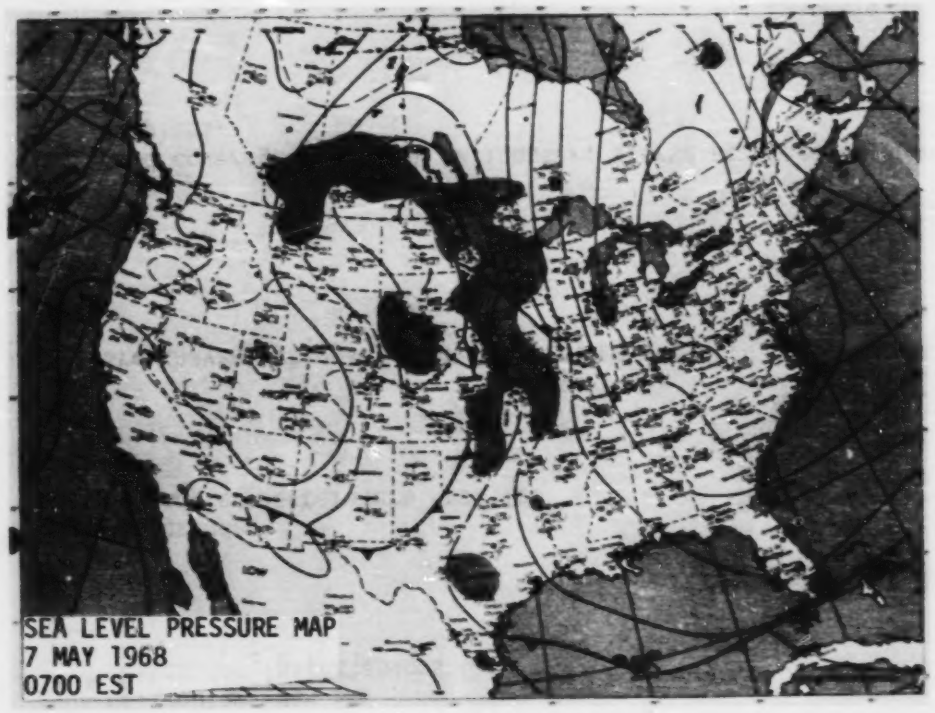
Two 4-km cross sections flown to document plume continuity. Partial coverage of GLC by helicopter and bubblers.

Synoptic Situation

Regional - High centered over western Pennsylvania dominating eastern U.S. Surface wind light easterly. Closed 500-mb low over eastern Quebec with trough southward; ridge from Georgia to Ontario. Wind at 500 mb NW 18 mps.

Local - Sunrise scattered high clouds and ground fog. Stable with inversions to 500 meters; lapse above to 1050 meters. Plume wind NE 8 mps. 1030 AM low and high scattered clouds. Near-neutral to 1050 meters. Plume wind NNE 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



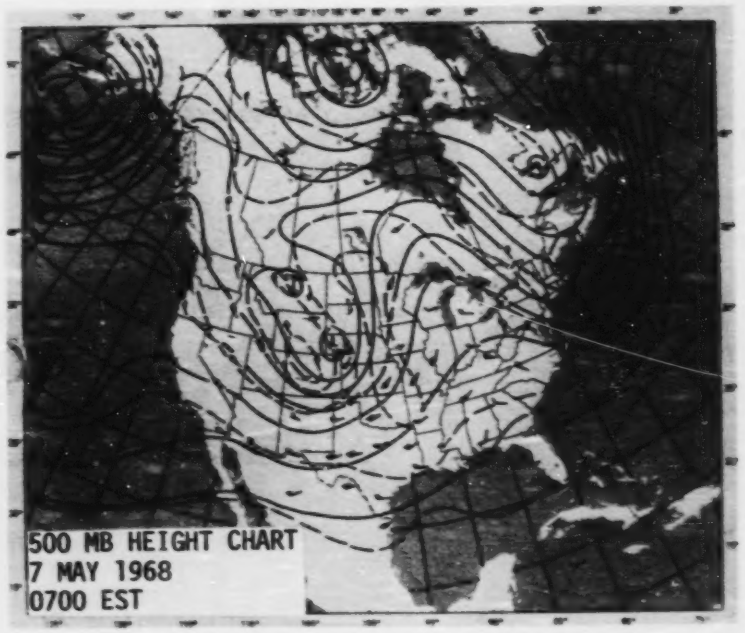


Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 8 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Meteorological Measurements

Pilot Balloons
Airport Surface Data

Radiosondes
Helicopter Temperature Profiles

Other Participants

Brookhaven National Laboratory (plume isotopic ratio measurements)

Commentary

Good coverage of GLC by helicopter; sparse coverage by bubblers caused by excessive cross-plume placement of samplers.

Synoptic Situation

Regional - High centered off New Jersey coast in advance of front from western Michigan to western Texas. Surface wind light southeasterly. N-S 500-mb ridge through Pennsylvania; closed low over western Minnesota. Wind at 500 mb WSW 12 mps.

Local - Sunrise broken high clouds. Stable with inversions to 700 meters; near-neutral above to 1040 meters. Plume wind SSE 9 mps. 11 AM low broken clouds. Slight inversion at 250 meters; neutral below and above to 710 meters. Plume wind S 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

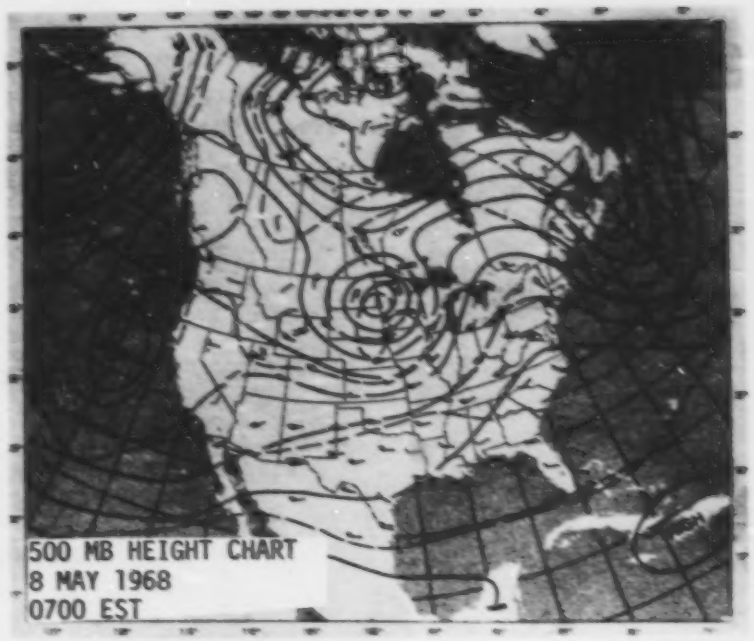


Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 9 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Second 10-km cross section flown during moderate to heavy rain; remaining four cross sections flown during intermittent light rain. 4-and 10-km cross sections repeated to document plume continuity. Ground-level flights discontinued because of weather. Bubblers were not set out.

Synoptic Situation

Regional - High off Atlantic coast; cold front southwestward from Lake Huron through central Arkansas. Surface wind SW 7 mps. 500-mb ridge along Atlantic coast; trough from Hudson Bay through Lake Superior to Missouri. Wind at 500 mb SW 20 mps.

Local - Sunrise low overcast with intermittent light rain. Stable with inversions to 400 meters and 750-900 meters; lapse between and above to 1065 meters. Plume wind SSW 9 mps. 09 AM low overcast with moderate rain. Stable to 550 meters; neutral above to 1030 meters. Plume wind SW 9 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 10 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Bottom of 16-km cross section reflects shifting wind direction. Good coverage of GLC by helicopter; partial coverage by bubblers. Autoanalyzer at airport office measured plume GLC.

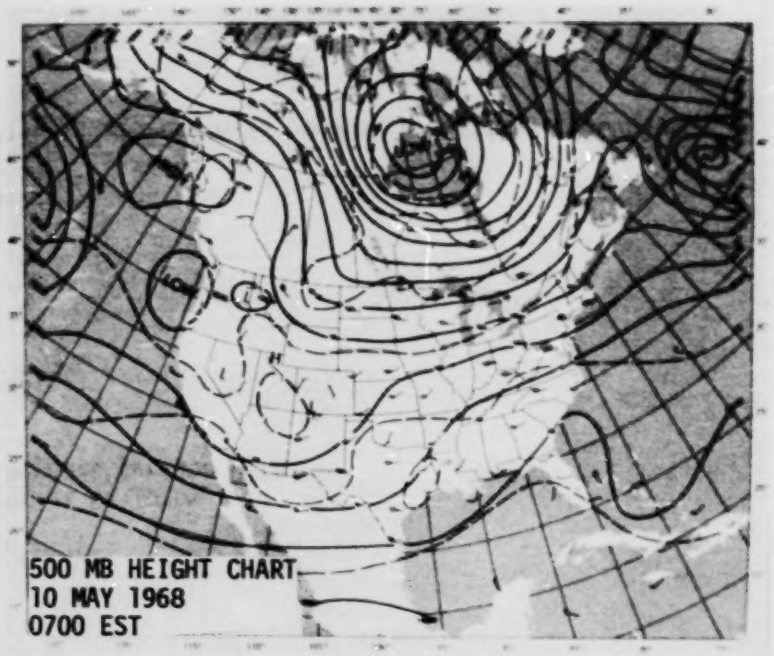
Synoptic Situation

Regional - Weak front from Maine coast through northern Virginia to Arkansas; high centered over Lake Michigan. Surface wind NW 5 mps. Deep 500-mb low over Hudson Bay with zonal flow over northeast U.S. Wind at 500 mb W 20 mps.

Local - Sunrise low overcast with fog. Slight inversion at 250 meters; lapse below and above to 1060 meters. Plume wind WNW 5 mps. 1130 AM low overcast. Neutral to 1050 meters. Plume wind WNW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
10 MAY 1968
0700 EST



500 MB HEIGHT CHART
10 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 11 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

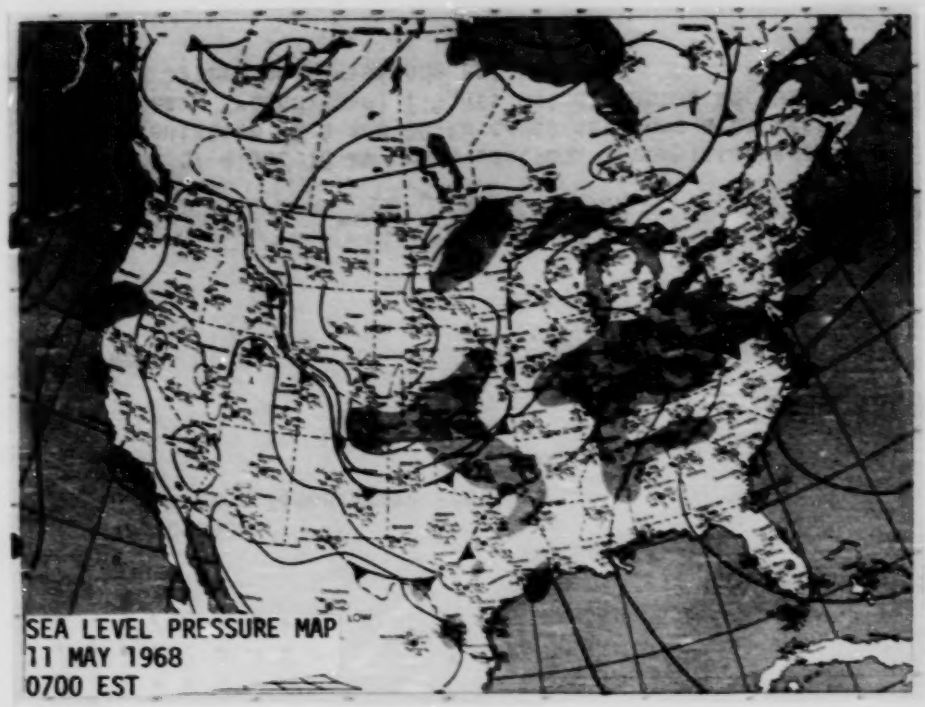
Plume cross sections flown during light rain. Ground-level flights discontinued because of weather. Bubblers were not set out.

Synoptic Situation

Regional - Low over southern Illinois with front eastward past Maryland coast; high over New England. Surface wind light easterly. Closed 500-mb low over Dakotas with trough southward to Texas; near-zonal flow over NE U.S. Wind at 500 mb W 15 mps.

Local - Sunrise low overcast with light rain. Surface inversion to 300 meters; stable above to 1060 meters. Plume wind S 2 mps. 08 AM low overcast with light rain. Stable with inversions to 650 meters; lapse above to 1020 meters. Plume wind SSE 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
11 MAY 1968
0700 EST

500 MB HEIGHT CHART
11 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 21 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

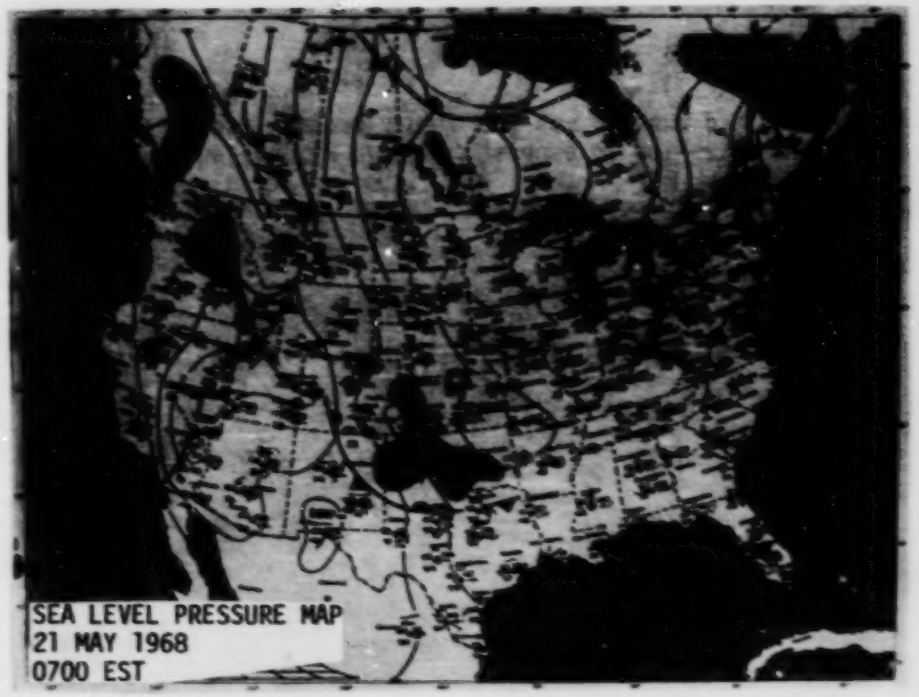
Tops of 4-and 10-km cross sections incomplete because of low ceiling; no 16-km cross section attempted. Orientation of 4-and 10-km cross sections arbitrarily set at 360° because of missing reference point coordinates. Ground-level flights not attempted because of approaching thunderstorms. Bubblers were not set out and afternoon radiosonde not released.

Synoptic Situation

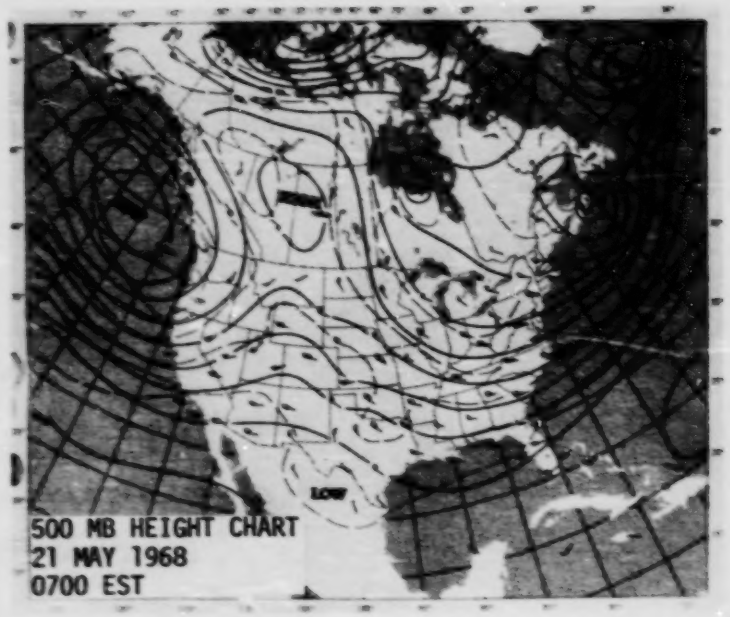
Regional - High over eastern Kansas with weak gradient over eastern half U.S. Surface wind W 5 mps. Broad 500-mb trough over eastern U.S. Wind at 500 mb NW 8 mps.

Local - Sunrise low overcast. Lapse to 365 meters. Plume wind W 6 mps. 0830 AM low overcast. Lapse to 425 meters. Plume wind W 5 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
21 MAY 1968
0700 EST



500 MB HEIGHT CHART
21 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 22 May 1968 Keystone Plume Unit #1

SO2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde

Airport Surface Data

Other Participants

Sign X Laboratories (helicopter plume rise measurements)

Commentary

LAPPES helicopter grounded because of defective magneto. Morning radiosonde released in support of Sign X activities. Bubblers were not set out and pilot balloons not released. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Weak high centered over eastern Kentucky dominating eastern half U.S. Surface wind near calm. Broad 500-mb trough over eastern U.S.; ridge from Oklahoma through the Dakotas. Wind at 500 mb WNW 15 mps.

Local - 10 AM low scattered, middle overcast with occasional light rain. Plume wind (from radiosonde) W 4 mps. 04 PM broken low clouds with occasional light rain. No helicopter temperature profiles or afternoon plume wind available.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 23 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Sign X Laboratories (helicopter plume rise measurements)

Commentary

Both 4-and 10-km cross sections flown during light rain; no 16-km cross section attempted. Ground-level flights discontinued because of weather. Bubblers were not set out.

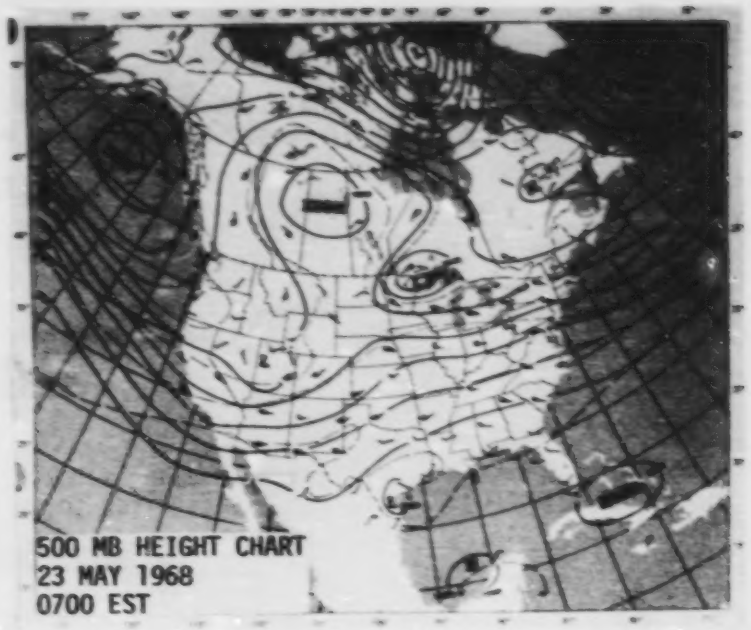
Synoptic Situation

Regional - High off Virginia Capes; frontal trough from Oklahoma to Virginia. Surface wind light easterly. Closed 500-mb low over Lake Superior with zonal flow over eastern U.S. Wind at 500 mb W 25 mps.

Local - Sunrise low overcast with light rain. Stable with inversions to 400 meters; neutral above to 1140 meters. Plume wind S 6 mps. 0830 AM low overcast with light rain. Inversion to 250 meters; lapse above to 700 meters. Plume wind SSE 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
23 MAY 1968
0700 EST



500 MB HEIGHT CHART
23 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 25 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Helicopter Peak GLC
Helicopter Instantaneous GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profile

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

LAPPES helicopter grounded until 1030 AM because of defective magneto. One ground-level flight made to check repairs. Bubblers were not set out. Radiosondes and pilot balloons released in support of SRI and Sign X activities.

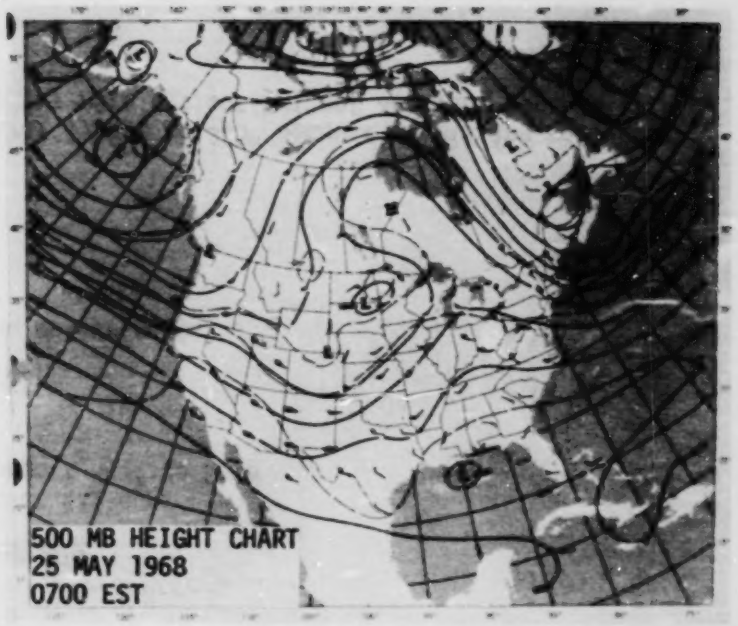
Synoptic Situation

Regional - High centered over Quebec dominating northeastern U.S. Weak front from low in Oklahoma through South Carolina. Surface wind light northeasterly. Closed 500-mb low over Dakotas; ridge from Kentucky through Great Lakes. Wind at 500 mb NW 15 mps.

Local - Sunrise clear with ground fog. Helicopter temperature profile not available. Plume wind ENE 7 mps. Noon broken high clouds. Near-neutral to 1080 meters. Plume wind E 1 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
25 MAY 1968
0700 EST



500 MB HEIGHT CHART
25 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 26 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

Extremely wide plume. Orientation of 16-km cross section arbitrarily set at 360° because of missing reference point coordinate. Partial coverage of GLC by helicopter. Bubblers were set out but not analyzed because of plume shift.

Synoptic Situation

Regional - High over northeastern Pennsylvania; lows over northern and southeastern Missouri. Surface wind light easterly. Narrow 500-mb ridge from western Hudson Bay to Carolina coast; closed low over Newfoundland. Wind at 500 mb W 10 mps.

Local - Sunrise middle scattered, high broken clouds. Stable with inversions to 1270 meters. Plume wind E 5 mps. 11 AM broken middle clouds. Neutral to 1030 meters. Plume wind SE 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 27 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)

Commentary

No 16-km cross section attempted because of high wind speeds at plume height. Good coverage of high wind, neutral GLC by helicopter; partial coverage by bubblers. Ground-level flights discontinued because of strong low-level turbulence.

Synoptic Situation

Regional - Low over eastern Wisconsin with weak front southeastward through eastern Tennessee; weak ridge over New England. Surface wind ESE 7 mps. Narrow 500-mb ridge from Hudson Bay to eastern Pennsylvania; closed low over Iowa. Wind at 500 mb S 5 mps.

Local - Sunrise low overcast with intermittent light rain and gusting winds. Lapse to 780 meters. Plume wind ESE 11 mps. 11 AM low overcast with intermittent light rain. Stable with inversions to 100 meters and 880-1050 meters; lapse between. Plume wind ESE 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

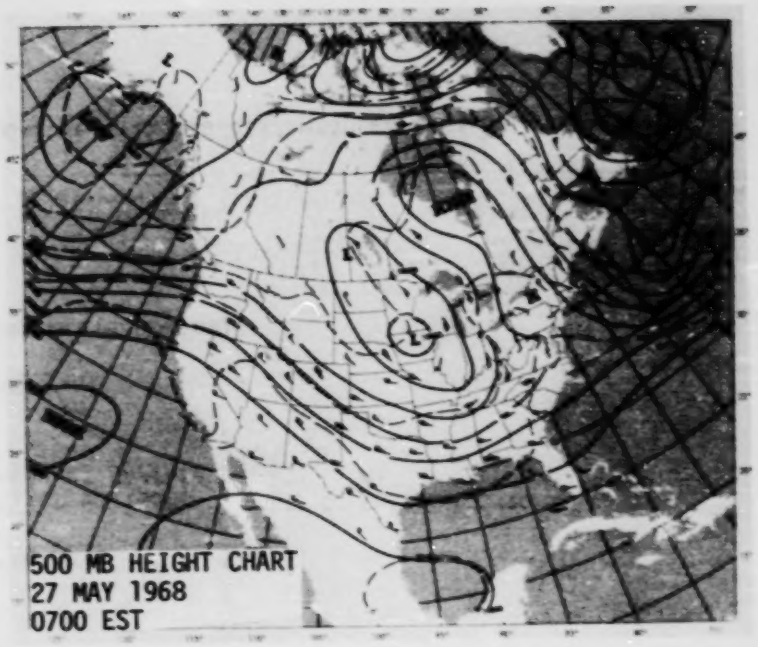


Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 28 May 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections

Helicopter Peak GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

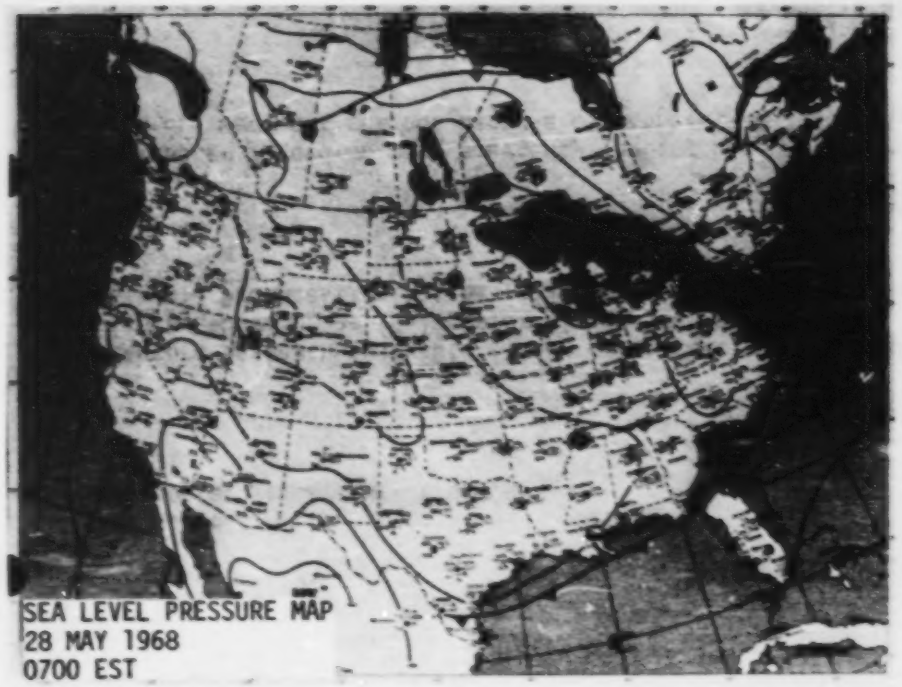
Plume cross sections flown during intermittent drizzle. Ground-level flights discontinued because of weather. Bubblers were not set out because of inoperative autoanalyzer.

Synoptic Situation

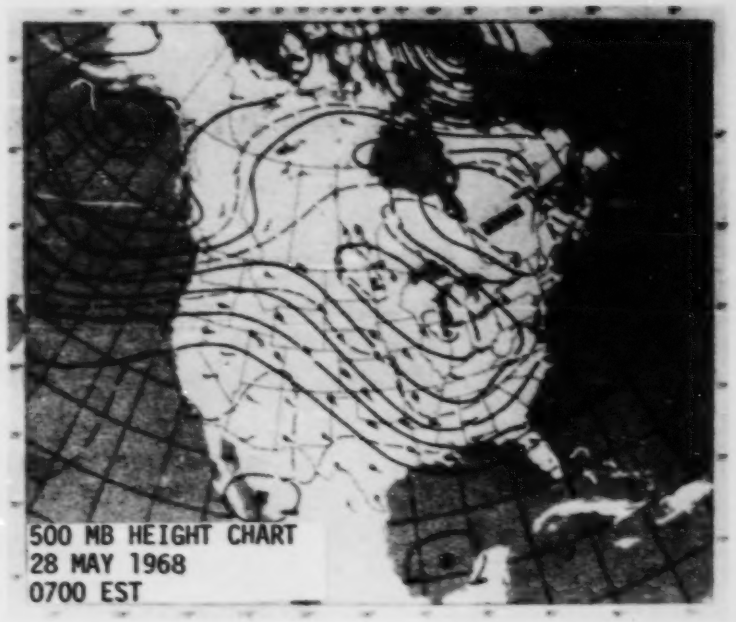
Regional - Low over eastern Wisconsin with flat NW-SE trough; weak ridge along Appalachians. Surface wind ESE 5 mps. Elongated 500-mb low from Indiana through Minnesota; high over central Quebec. Wind at 500 mb SE 15 mps.

Local - Sunrise low overcast with intermittent drizzle. Inversion 750-1100 meters; lapse below. Plume wind ESE 6 mps. 09 AM low overcast with light rain. Lapse to 600 meters. Plume wind E 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
28 MAY 1968
0700 EST



500 MB HEIGHT CHART
28 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 29 May 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Section

Meteorological Measurements

Radiosondes
Helicopter Temperature Profile
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Columbia Broadcasting System (filming of LAPPES activities for 21st Century Program)

Commentary

Helicopter forced to make emergency landing because of broken fan belt; only 4-km cross section completed. Bubblers were not set out because of inoperative autoanalyzer.

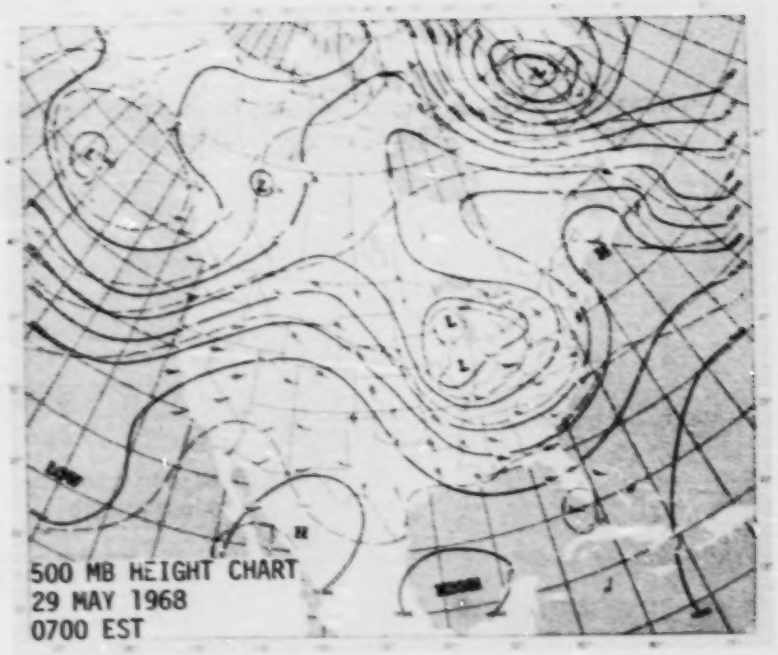
Synoptic Situation

Regional - Weak trough from low in western Illinois eastward to New Jersey; high along Gulf coast. Surface wind light southwesterly. Closed 500-mb low centered over southern Lake Michigan dominating eastern U.S. Wind at 500 mb SSW 8 mps.

Local - Sunrise low overcast with haze and fog. Stable with inversions to 1010 meters. Plume wind SSW 4 mps. Noon broken low clouds with haze. Helicopter temperature profile not available. Plume wind SW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
29 MAY 1968
0700 EST



500 MB HEIGHT CHART
29 MAY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 30 May 1968 Keystone Plume Unit #1

SO_2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profile

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)

Commentary

No plume cross sections or ground-level flights attempted because of weather. One helicopter temperature profile flown in support of SRI activities. Bubblers were not set out and afternoon radiosonde not released.

Synoptic Situation

Regional - Weak low from southern tip Hudson Bay to Carolinas; ridge along Mississippi Valley. Surface wind near calm. Closed 500-mb low over Lake Huron with trough southward to Florida. Wind at 500 mb SSW 10 mps.

Local - Sunrise low overcast with light rain and fog. Mostly stable with inversions to 1050 meters. Plume wind SW 3 mps. 10 AM low overcast with rain and fog. No 10 AM helicopter temperature profile or plume wind available.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 31 May 1968 Keystone Plume Unit #1

SO_2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

No plume cross sections or ground-level flights attempted because of weather. Two helicopter temperature profiles flown in support of SRI activities. Bubblers were not set out. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Flat high from Appalachians to Mississippi Valley; weak NW-SE trough over New York. Surface wind W 5 mps. Closed 500-mb low over Lake Ontario; ridge from northern Missouri through Minnesota. Wind at 500 mb NW 20 mps.

Local - Sunrise low overcast with haze. Stable with inversions to 450 meters; lapse above to 1040 meters. Plume wind W 6 mps. 08 AM low overcast with haze. Neutral to 420 meters. Plume wind WSW 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

May 1968 Series 1 June 1968 Keystone Plume Unit #1

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)

Commentary

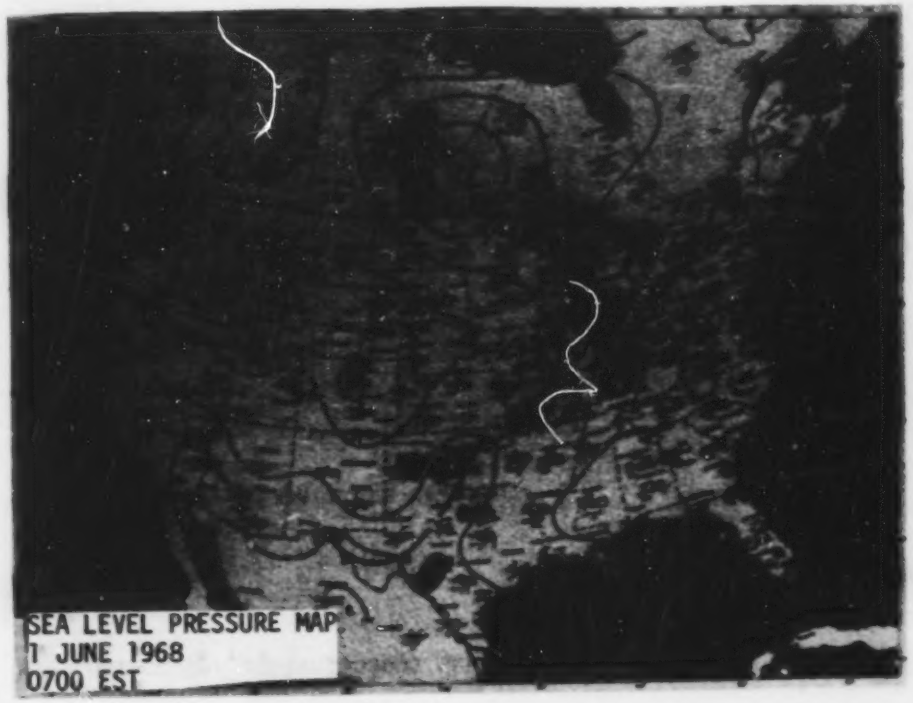
Takeoff delayed for two hours by heavy ground fog. No 4-km cross section attempted because of steam plume interference. Ground-level flights discontinued because of restricted visibility. Bubblers were not set out and afternoon radiosonde not released.

Synoptic Situation

Regional - NE-SW ridge over Appalachians in advance of frontal trough from Wisconsin to Oklahoma. Surface wind calm. 500-mb ridge from Kentucky to Ontario. Wind at 500 mb NW 10 mps.

Local - Sunrise clear with dense fog. Stable with inversions to 600 meters; lapse above to 1030 meters. Plume wind not available. 09 AM clear with dense fog and haze. Stable with inversions to 350 meters and 750-800 meters; lapse between and above to 1050 meters. Plume wind SSW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



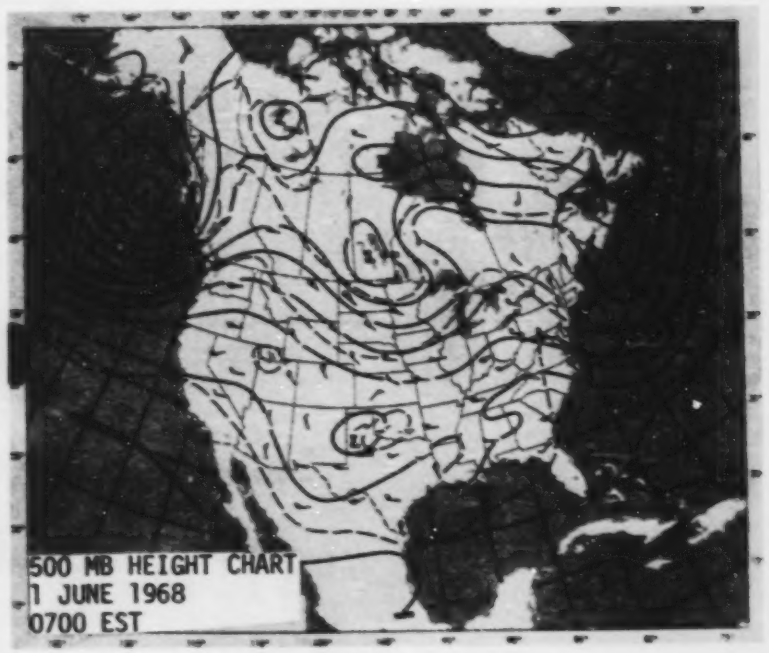


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 29 June 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Partial coverage of GLC by helicopter and bubblers.

Synoptic Situation

Regional - Low over eastern Wisconsin with warm front to Lake Erie; western extension of Bermuda high into Georgia and Carolinas. Surface wind S 5 mps. Weak 500-mb high over southeast U.S. with zonal flow over northeast. Wind at 500 mb NW 20 mps.

Local - Sunrise broken low clouds. Stable with inversions to 600 meters; lapse above to 1030 meters. Plume wind SSW 8 mps. 10 AM clear. Inversion 700-850 meters; neutral below and lapse above to 1000 meters. Plume wind SW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
29 JUNE 1968
0700 EST

500 MB HEIGHT CHART
29 JUNE 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 30 June 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Ground-level flights discontinued because of helicopter transmission difficulties; partial coverage of GLC by bubblers. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Stationary front from low in South Dakota to southern Maine. Remainder of eastern U.S. under high centered off Carolina coast. Surface wind light southerly. Short-wave 500-mb trough over Montana; high over southeastern U.S. Wind at 500 mb NW 20 mps.

Local - Sunrise scattered middle clouds with ground fog and haze. Stable with inversions to 980 meters. Plume wind WSW 7 mps. 09 AM scattered low clouds. Near-neutral to 500 meters. Plume wind W 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

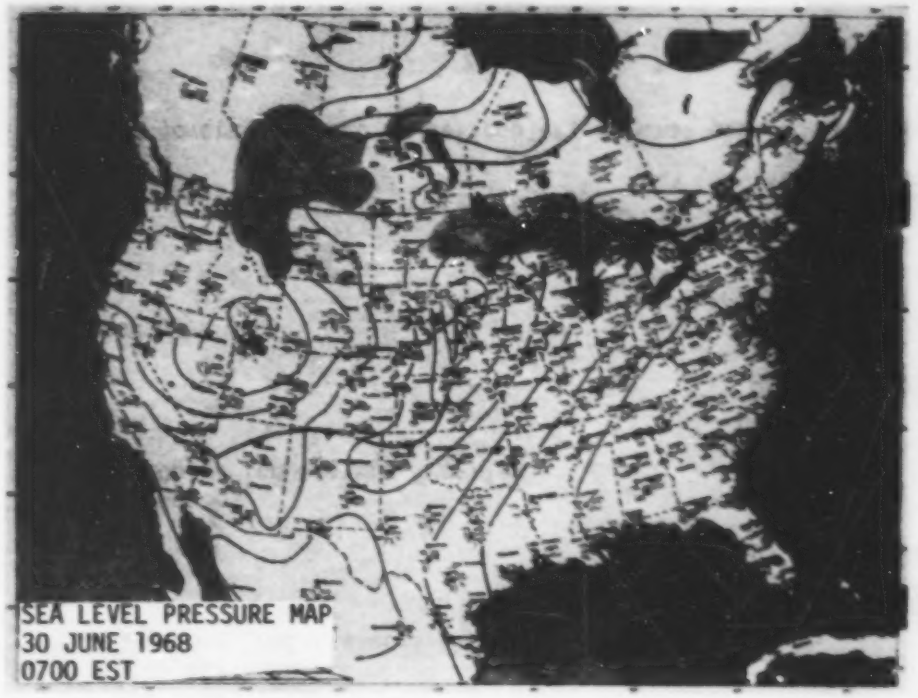


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 1 July 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Good coverage of GLC by helicopter; partial coverage by bubblers. Afternoon radiosonde not available.

Synoptic Situation

Regional - Frontal trough from southern Ontario to New Mexico; high over southeastern U.S. Surface wind SW 5 mps. 500-mb high centered off Carolina coast with ridge to Hudson Bay. Wind at 500 mb SW 12 mps.

Local - Sunrise clear with dense haze. Surface inversion to 460 meters; lapse above to 1030 meters. Plume wind SW 8 mps. 11 AM scattered low clouds with haze. Neutral to 1000 meters. Plume wind WNW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
1 JULY 1968
0700 EST

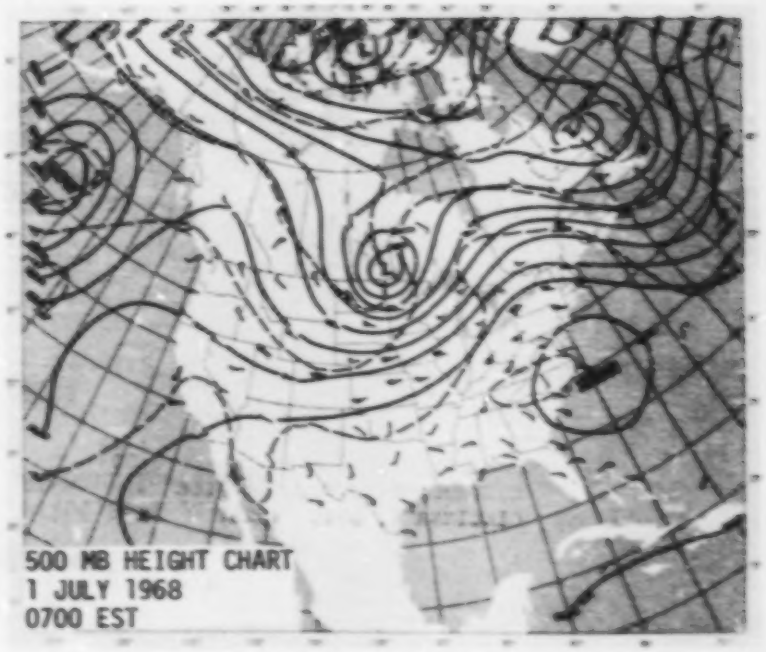

500 MB HEIGHT CHART
1 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 3 July 1968 Keystone Plume Units #1 & #2

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Good coverage of GLC by helicopter; partial coverage by bubblers.

Synoptic Situation

Regional - Large high centered over Missouri and Iowa extending northeastward to Atlantic coast. Weak front from Virginia to Texas coast. Surface wind near calm. 500-mb trough from Lake Huron to Texas. Wind at 500 mb WSW 20 mps.

Local - Sunrise broken high clouds with haze. Stable to 250 meters; lapse above to 1000 meters. Plume wind N 5 mps. 10 AM broken high clouds. Neutral to 850 meters; stable above to 1050 meters. Plume wind NNW 3 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 4 July 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

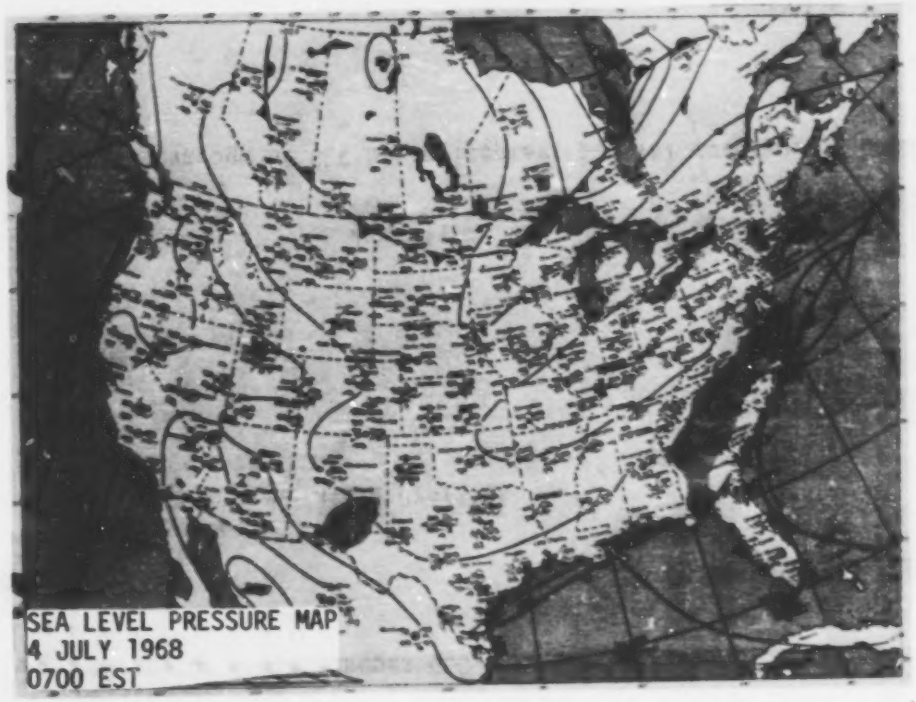
A 16-km cross section was attempted but not completed because of extreme plume width. 4-km cross section flown last because of early morning steam plume interference. Ground-level flights discontinued because of SO2 analyzer malfunction. Bubblers were not set out.

Synoptic Situation

Regional - Large high centered over Ohio Valley dominating eastern half U.S. Surface wind light westerly. Shallow 500-mb trough from eastern Great Lakes southward to Georgia. Wind at 500 mb W 10 mps.

Local - Sunrise clear with ground fog. Surface inversion to 350 meters; lapse above to 1040 meters. Plume wind WNW 3 mps. 09 AM broken low clouds. Neutral to 850 meters; stable above to 1050 meters. Plume wind NW 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY


SEA LEVEL PRESSURE MAP
4 JULY 1968
0700 EST

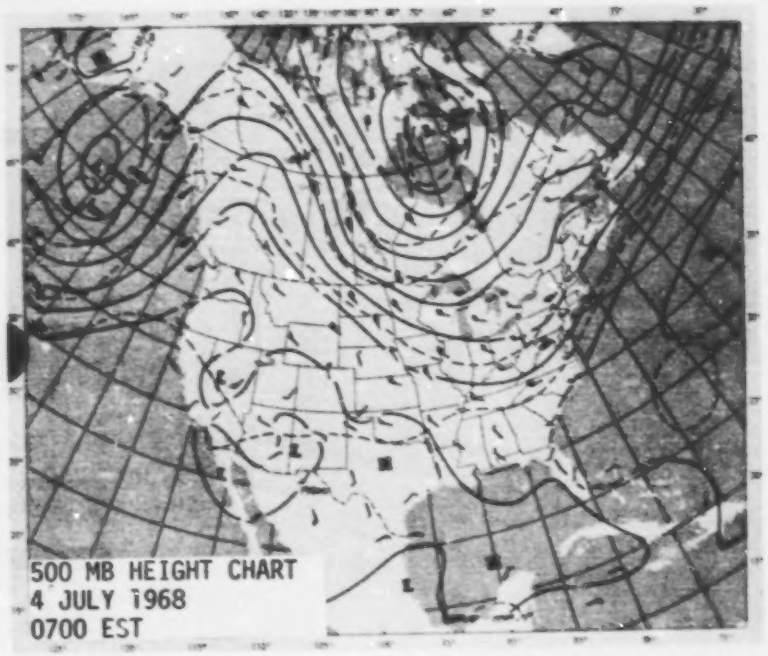

500 MB HEIGHT CHART
4 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 5 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

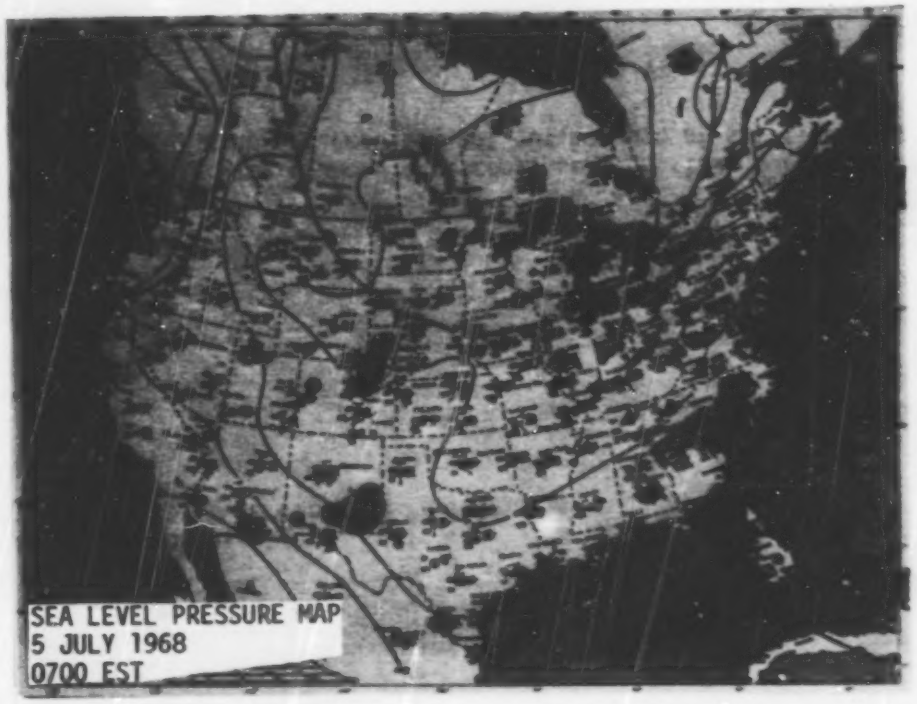
Good coverage of GLC by helicopter; partial coverage by bubblers.

Synoptic Situation

Regional - Highs over Minnesota and Pennsylvania separated by weak cold front from low in central Quebec through Iowa. Surface wind light southerly. Closed 500-mb low over Hudson Bay with trough southward through Great Lakes. Wind at 500 mb W 12 mps.

Local - Sunrise clear with dense haze. Inversion 80-400 meters; near-neutral above to 1020 meters. Plume wind SSW 5 mps. 11 AM clear with haze. Neutral to 1050 meters. Plume wind SW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



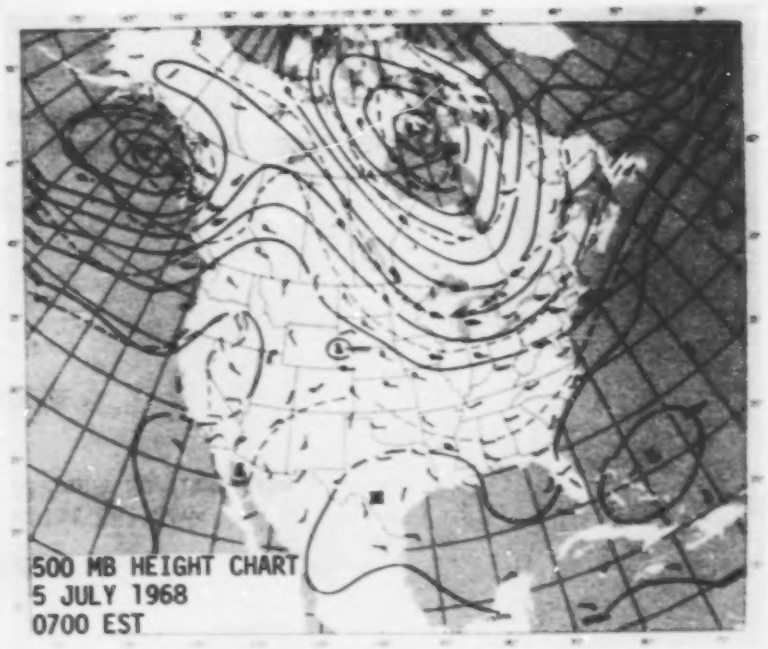


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 6 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

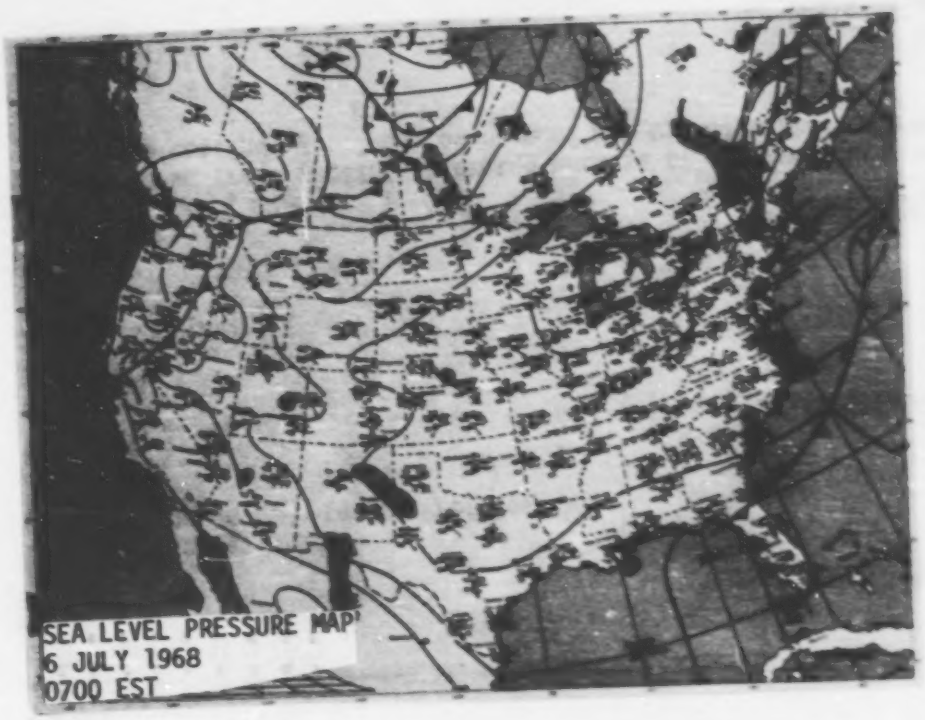
Extremely wide plume. 4-km cross section flown during light to moderate rain. Good coverage of GLC by helicopter. Bubblers were not set out because of shifting plume direction.

Synoptic Situation

Regional - Weak NE-SW cold front across Pennsylvania; high centered over Michigan dominating eastern half U.S. Surface wind light northwesterly. 500-mb low over northern Hudson Bay with trough southward to tip of Florida. Wind at 500 mb WNW 15 mps.

Local - Sunrise broken low clouds with intermittent rain showers and thundershowers. Surface inversion to 450 meters; near-neutral above to 1030 meters. Plume wind WSW 1 mps. 11 AM broken low clouds with intermittent rain showers. Neutral to 780 meters. Plume wind N 1 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



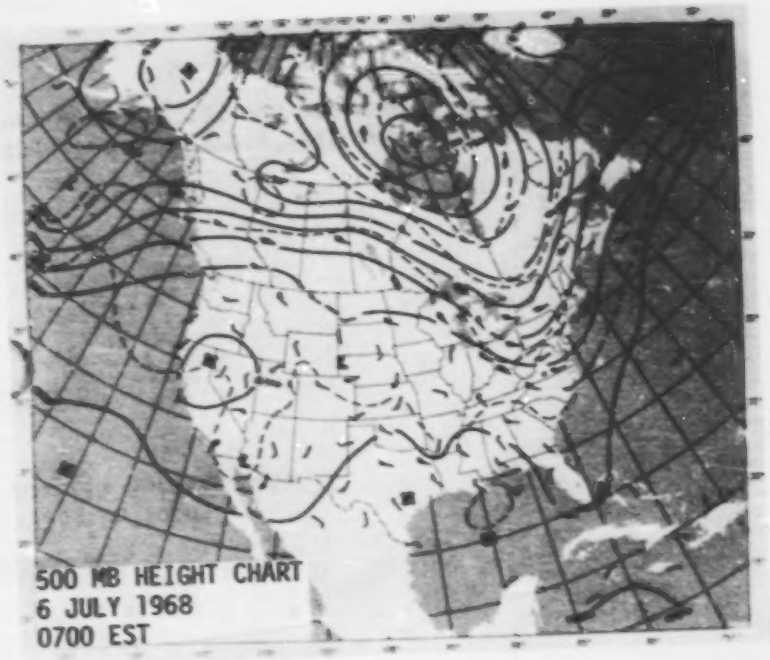


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 8 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted because of extreme plume width. Two 4-km cross sections flown to document plume continuity. Good coverage of GLC by helicopter. Bubblers were not set out because of reagent shortage.

Synoptic Situation

Regional - High centered off central Atlantic coast dominating eastern half U.S. Surface wind light easterly. 500-mb trough over Mississippi Valley and high over Virginia. Wind at 500 mb SW 8 mps.

Local - Sunrise scattered high clouds with fog and haze. Surface inversion to 300 meters; lapse above to 1050 meters. Plume wind S 3 mps. 11 AM scattered high clouds with haze. Neutral to 1040 meters. Plume wind SSE 4 mps.

Table 1.(continued). DAILY EXPERIMENT SUMMARY

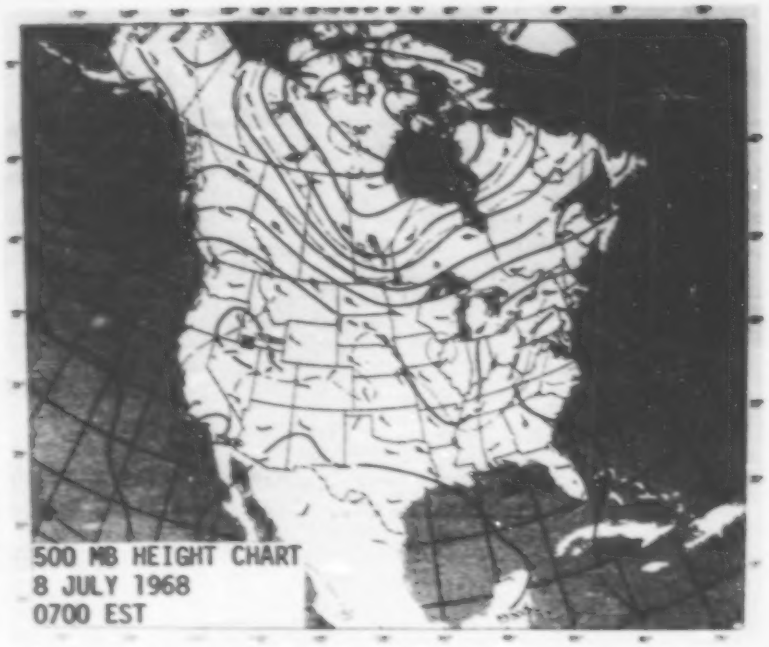


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 9 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Good coverage of GLC by helicopter; partial coverage by bubblers.

Synoptic Situation

Regional - High well off Atlantic coast. Cold front from low in northern Quebec across Great Lakes to Oklahoma. Surface wind light southerly. Closed 500-mb low west of Hudson Bay with trough through Great Lakes; second low in northern Mississippi. Wind at 500 mb SW 15 mps.

Local - Sunrise high broken clouds with dense haze. Stable with inversions to 800 meters; lapse above to 1040 meters. Plume wind SSW 6 mps. 10 AM broken high clouds with dense haze. Neutral to 730 meters. Plume wind SW 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

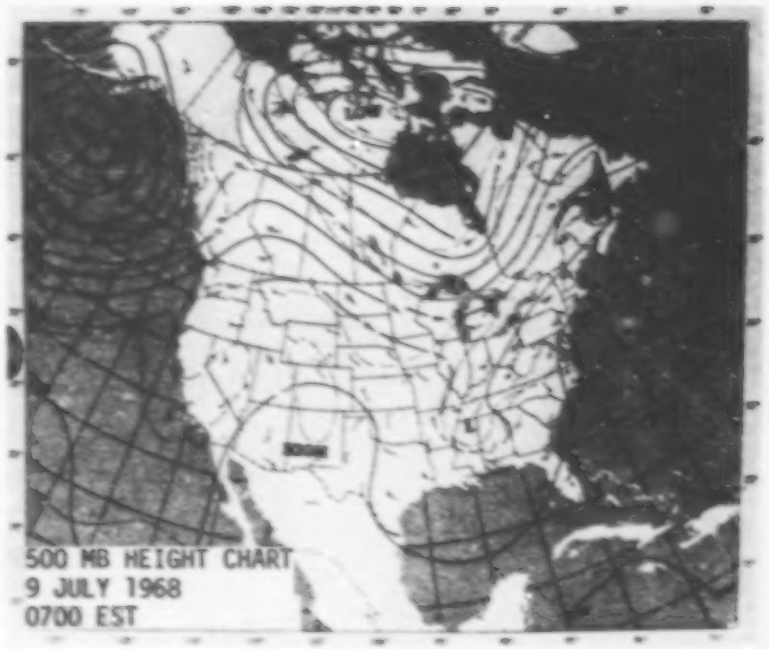


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 10 July 1968 Keystone Plume Units #1 & #2

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted because of extreme plume width. Two 4-km cross sections flown to document plume continuity. Ground-level flights discontinued because of restricted visibility. Bubblers were not set out. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - High over upper Great Lakes. Weak NE-SW cold front through western Pennsylvania. Surface wind light northerly. Weak 500-mb low over Tennessee with flat gradient over eastern U.S. Wind at 500 mb W 5 mps.

Local - Sunrise scattered high clouds with dense haze. Surface inversion to 400 meters; lapse above to 1050 meters. Plume wind SW 3 mps. 0930 AM scattered high clouds with dense haze. Inversion 400-550 meters; lapse below and above to 1050 meters. Plume wind WNW 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 14 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Extremely wide plume. 4-km cross section flown last because of early morning steam plume interference. High background GLC detected by helicopter. Ground-level flights discontinued because of SO_2 recorder malfunction. Bubblers were set out but not analyzed because of lack of definitive plume measurements at surface. Area under high air pollution potential alert.

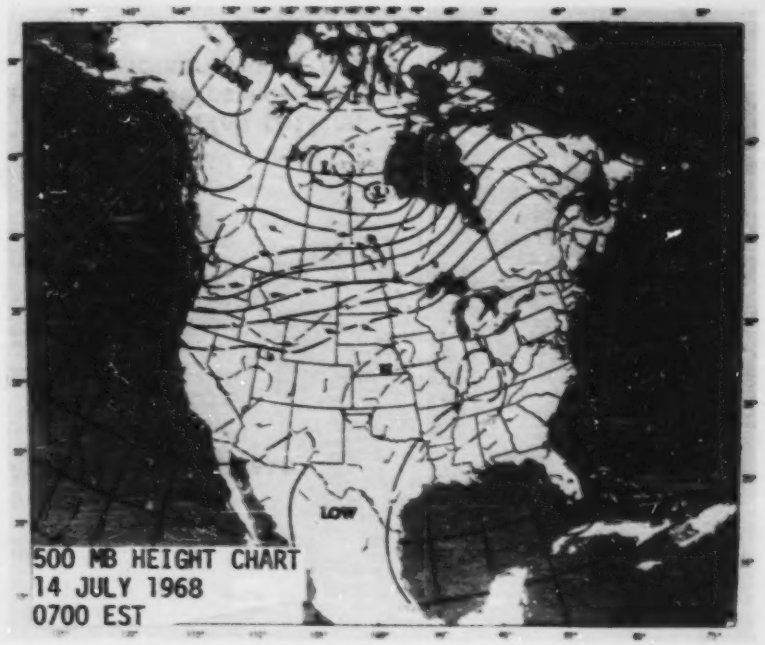
Synoptic Situation

Regional - Bermuda high dominating eastern half U.S. Surface wind light southerly. Weak 500-mb high over surface high; flat gradient over most of U.S. Wind at 500 mb S 3 mps.

Local - Sunrise broken middle clouds with haze. Stable with inversions to 850 meters; lapse above to 1040 meters. Plume wind S 5 mps. 10 AM broken middle clouds with haze. Near-neutral to 600 meters; stable above to 1000 meters. Plume wind SSW 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
14 JULY 1968
0700 EST



500 MB HEIGHT CHART
14 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 17 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted because of restricted visibility and lowering ceiling. Ground-level flights discontinued for same reason. Bubblers were not set out and afternoon radiosonde not released. Layers of red smoke trapped by inversion observed upwind of Keystone Plant. SO_2 concentrations in this layer exceeded 0.3 ppm. Autoanalyzer at airport office measured plume GLC.

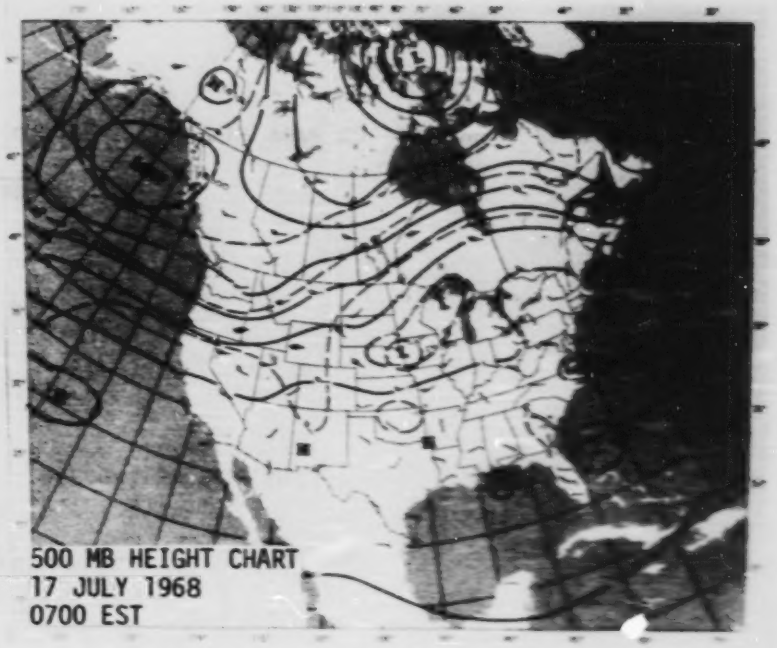
Synoptic Situation

Regional - High over West Virginia dominating eastern half U.S. Surface wind near calm. Weak 500-mb lows in Iowa and Minnesota and along Atlantic and Gulf coasts; flat gradient elsewhere. Wind at 500 mb W 5 mps.

Local - Sunrise low overcast with ground fog and dense haze. Stable with inversions to 1030 meters. Plume wind WSW 2 mps. 09 AM low overcast with dense haze and smoke. Inversion 450-600 meters; lapse below and above to 740 meters. Plume wind W 1 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
17 JULY 1968
0700 EST



500 MB HEIGHT CHART
17 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 19 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

On-Stream Autoanalyzer GLC

Plume Cross Sections
Helicopter Peak GLC

Meteorological Measurements

Pilot Balloons
Airport Surface Data

Radiosondes
Helicopter Temperature Profiles

Other Participants

None

Commentary

Ground-level flights discontinued because of rain and low ceiling. Bubblers were not set out. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Low over central Quebec with frontal trough through western Pennsylvania; weak gradient over remainder of U.S. Surface wind light southwesterly. 500-mb trough from James Bay to Carolinas with weak gradient south of Great Lakes. Wind at 500 mb WSW 15 mps.

Local - Sunrise scattered middle clouds with haze. Stable with inversions to 1020 meters. Plume wind SW 9 mps. 09 AM low overcast with intermittent light rain. Near-neutral to 440 meters. Plume wind WSW 5 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

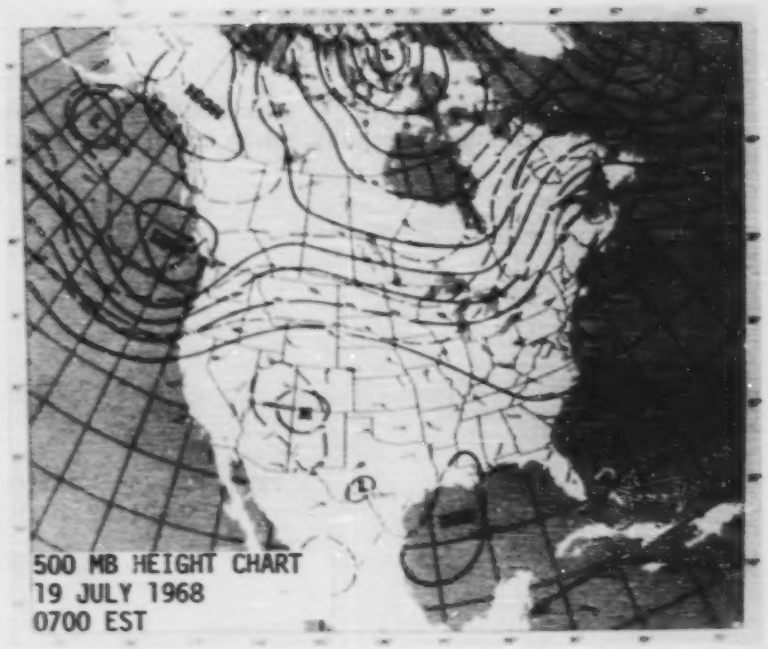


Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 21 July 1968 Keystone Plume Unit #1

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

No 16-km cross section attempted because of extreme plume width; 4-and 10-km cross sections repeated to define plume shift. Ground-level flights discontinued because of noise interference with Sunday morning services. Bubblers were set in an arc to detect cross-plume GLC distribution.

Synoptic Situation

Regional - High over West Virginia with weak gradient over eastern half U.S. Surface wind light southerly. Flat 500-mb high over southern two-thirds U.S.; westerly flow along northern border. Wind at 500 mb WNW 12 mps.

Local - Sunrise clear with fog and haze. Surface inversion to 400 meters; lapse above to 1050 meters. Plume wind ESE 3 mps. 1030 AM scattered high clouds with haze. Neutral to 750 meters. Plume wind SSW 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
21 JULY 1968
0700 EST

500 MB HEIGHT CHART
21 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

July 1968 Series 22 July 1968 Keystone Plume Units #1 & #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Extremely wide plume. No GLC detected by helicopter; ground-level flights discontinued because of restricted visibility. Bubblers were set out but not analyzed because plume shifted away.

Synoptic Situation

Regional - Deep low over James Bay with frontal trough to Great Lakes, then westward to Colorado. High over southeastern U.S. Surface wind light and variable. Flat 500-mb gradient over southern two-thirds U.S. with westerly flow along northern border. Wind at 500 mb W 12 mps.

Local - Sunrise clear with haze. Surface inversion to 350 meters; near-neutral above to 1050 meters. Plume wind SSW 7 mps. 1030 AM scattered middle clouds with dense haze. Near-neutral to 1040 meters. Plume wind W 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
22 JULY 1968
0700 EST

500 MB HEIGHT CHART
22 JULY 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 15 October 1968 Keystone Plume Unit #2

SO_2 Measurements

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Pilot Balloons

Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

LAPPES helicopter grounded because of defective voltage regulator. Bubblers were not set out. Radiosondes and pilot balloons released in support of SRI and MRI activities.

Synoptic Situation

Regional - High centered along New England coast dominating eastern half U.S. Surface wind calm. Weak 500-mb gradient over eastern U.S. Wind at 500 mb SE 3 mps.

Local - Sunrise clear with ground fog. Plume wind (from radiosonde) S 2 mps. Noon clear with haze. Plume wind SSW 4 mps. Helicopter temperature profiles not available.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
15 OCTOBER 1968
0700 EST

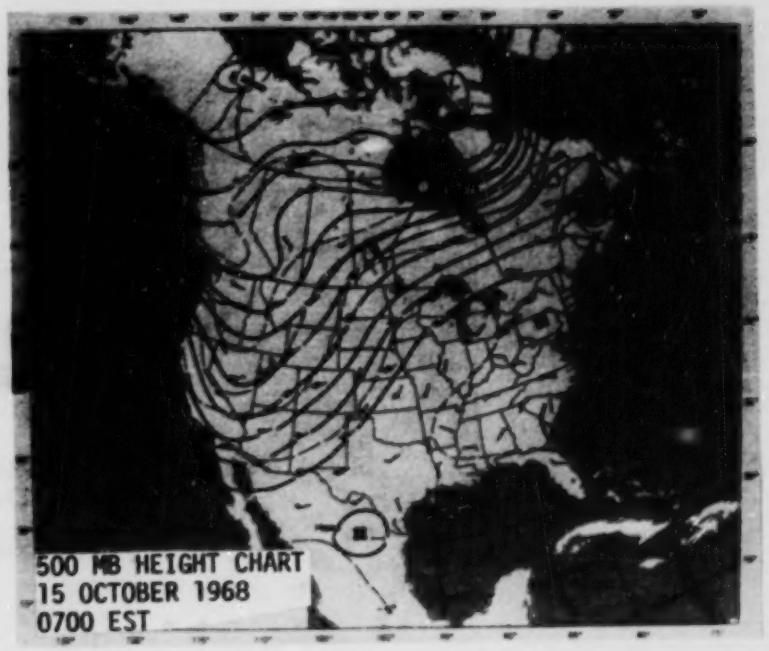

500 MB HEIGHT CHART
15 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 16 October 1968 Keystone Plume Unit #2

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC

Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

10-km cross section flown in two segments because of defective voltage regulator. Ground-level flights discontinued for same reason. Bubblers were set out but not analyzed because plume shifted away.

Synoptic Situation

Regional - High centered well off New England coast dominating eastern half U.S. Surface wind light and variable. 500-mb high above surface high with weak gradient over eastern U.S. Wind at 500 mb SSE 12 mps.

Local - Sunrise clear with ground fog. Stable with inversions to 550 meters; lapse above to 1040 meters. Plume wind SE 5 mps. 11 AM clear. Neutral to 780 meters; stable above to 1030 meters. Plume wind SE 5 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
16 OCTOBER 1968
0700 EST

500 MB HEIGHT CHART
16 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 17 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

Good coverage of GLC by helicopter; zero GLC measured by bubblers because of placement too far east.

Synoptic Situation

Regional - High along New England coast dominating eastern U.S. to Mississippi Valley. Hurricane Gladys near Key West. Surface wind light southerly. Closed 500-mb low over Kansas and Nebraska; ridge from high off New England coast to Hudson Bay. Wind at 500 mb SW 15 mps.

Local - Sunrise broken low and middle clouds. Stable with inversions to 1050 meters. Plume wind SSE 7 mps. Noon scattered low and middle clouds. Near-neutral to 800 meters; stable above to 1070 meters. Plume wind SSE 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 18 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

16-km cross section flown during light rain. Ground-level flights discontinued because of weather. Bubblers were set out but not analyzed because plume was not brought to surface. Morning radiosonde not released.

Synoptic Situation

Regional - Frontal trough from northern Quebec to Minnesota; N-S front from Sault Ste Marie through Alabama. Hurricane Gladys west of Tampa. Surface wind light southeasterly. Deep 500-mb low over Minnesota; high well off New England coast. Wind at 500 mb SW 15 mps.

Local - Sunrise broken middle clouds with intermittent light rain. Stable with inversions to 1060 meters. Plume wind SE 7 mps. 11 AM low scattered, middle overcast with light rain. Neutral to 850 meters; stable above to 1060 meters. Plume wind SSE 8 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

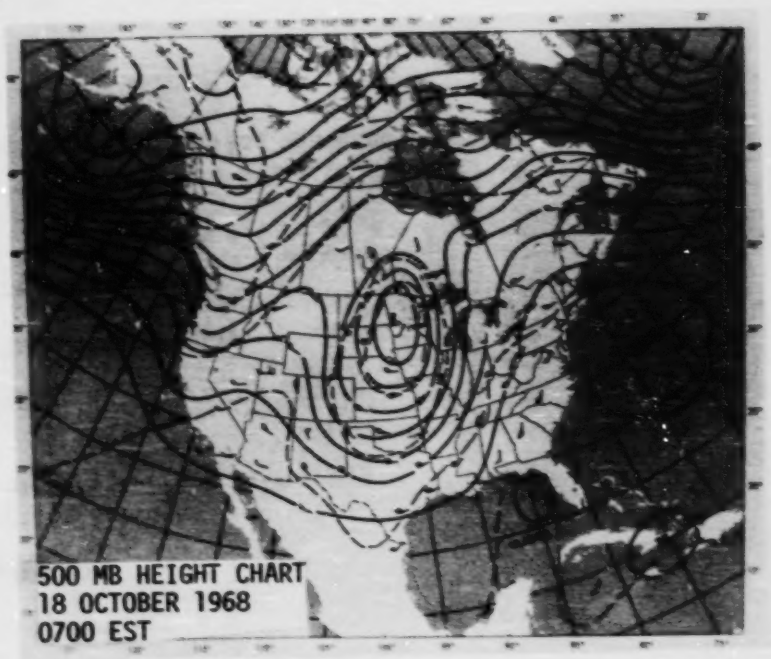


Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 20 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

Good coverage of GLC by helicopter and bubblers. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - Hurricane Gladys off Hatteras with N-S front from Maine to Florida Keys. Flat high dominating eastern two-thirds of U.S. Surface wind calm. Closed 500-mb low over Hurricane Gladys; trough from low over Hudson Bay to Tennessee. Wind at 500 mb SW 25 mps.

Local - Sunrise clear with fog and haze. Surface inversion to 500 meters; lapse above to 1035 meters. Plume wind WSW 7 mps. Noon clear with haze. Near-neutral to 1045 meters. Plume wind W 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 21 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

Good coverage of GLC by helicopter and bubblers.

Synoptic Situation

Regional - Remains of hurricane Gladys off Nova Scotia. Flat high centered over Kentucky dominating eastern half U.S. Surface wind light westerly. Deep 500-mb trough southward from low over Maine; ridge over Mississippi Valley. Wind at 500 mb NW 25 mps.

Local - Sunrise broken low clouds with haze. Surface inversion to 370 meters; lapse above to 1030 meters. Plume wind NW 8 mps. 1130 AM broken low clouds with haze. Near-neutral to 1070 meters. Plume wind NW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

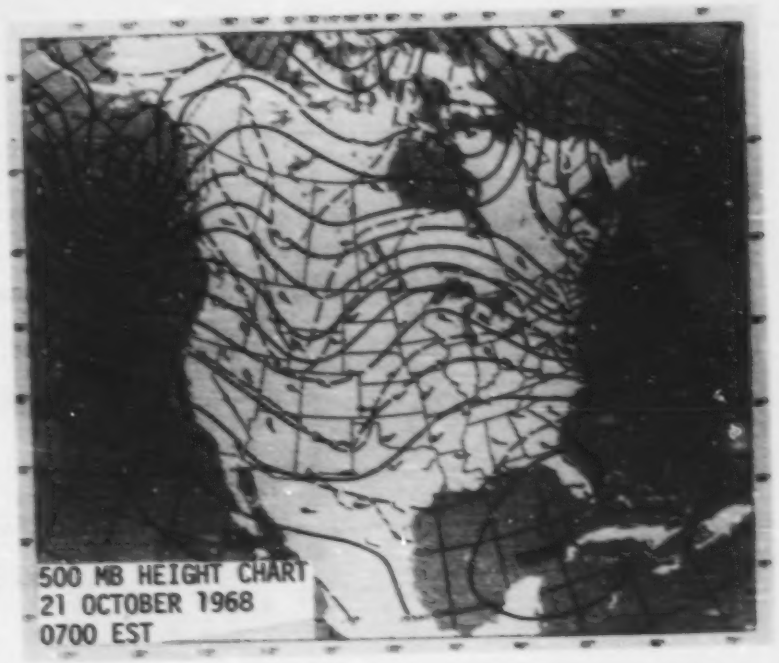


Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 22 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)
Meteorology Research (plume turbulence and flyash particle size measurements)

Commentary

Extremely wide plume. Good coverage of GLC by helicopter and bubblers.

Synoptic Situation

Regional - Low over Lake Superior with cold front southward through Arkansas; high off Carolina coast. Surface wind light southeasterly. 500-mb ridge from Hatteras to central Quebec; trough from western Hudson Bay to Texas coast. Wind at 500 mb W 20 mps.

Local - Sunrise scattered high clouds with ground fog. Stable with inversions to 1030 meters. Plume wind SSE 5 mps. Noon broken high clouds. Slight inversion at 600 meters; near-neutral below and above to 1030 meters. Plume wind SSW 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 23 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

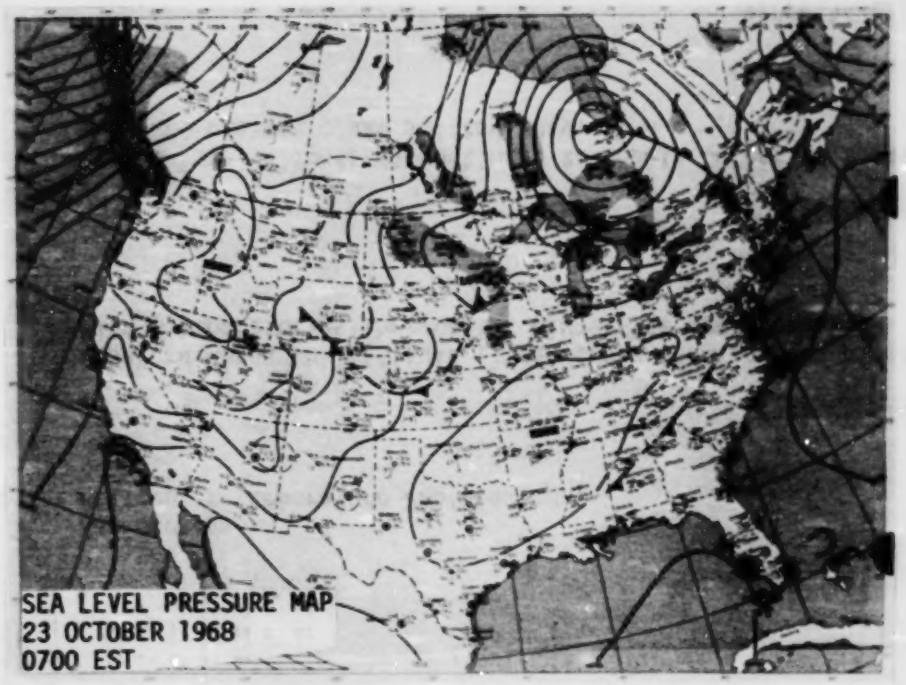
Good coverage of GLC by helicopter and bubblers. Ground-level flights discontinued to repair defective temperature recorder. Low-altitude termination of pilot-balloon runs caused by steam plume interference.

Synoptic Situation

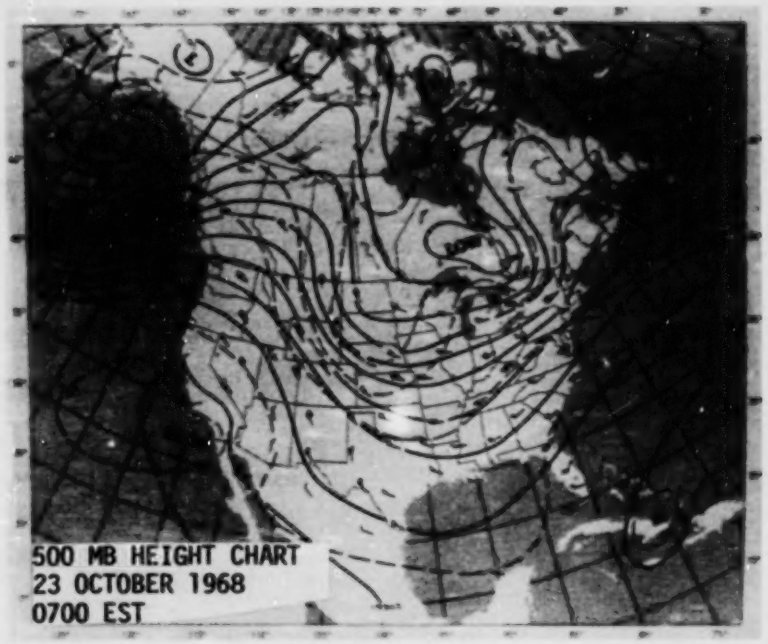
Regional - NE-SW high centered over Arkansas. Low over James Bay with front SE to New Jersey, then SW to Alabama. Surface wind SW 5 mps. Closed 500-mb low north of Great Lakes with trough to eastern New York; broad trough over Mississippi Valley. Wind at 500 mb WSW 20 mps.

Local - Sunrise scattered high clouds. Surface inversion to 100 meters; lapse above to 1180 meters. Plume wind WSW 7 mps. 11 AM scattered low and high clouds. Near-neutral to 1100 meters; stable above to 1215 meters. Plume wind SW 8 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
23 OCTOBER 1968
0700 EST



500 MB HEIGHT CHART
23 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 24 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Stanford Research Institute (lidar cross sections and plume rise measurements)
Sign X Laboratories (helicopter plume rise measurements)

Commentary

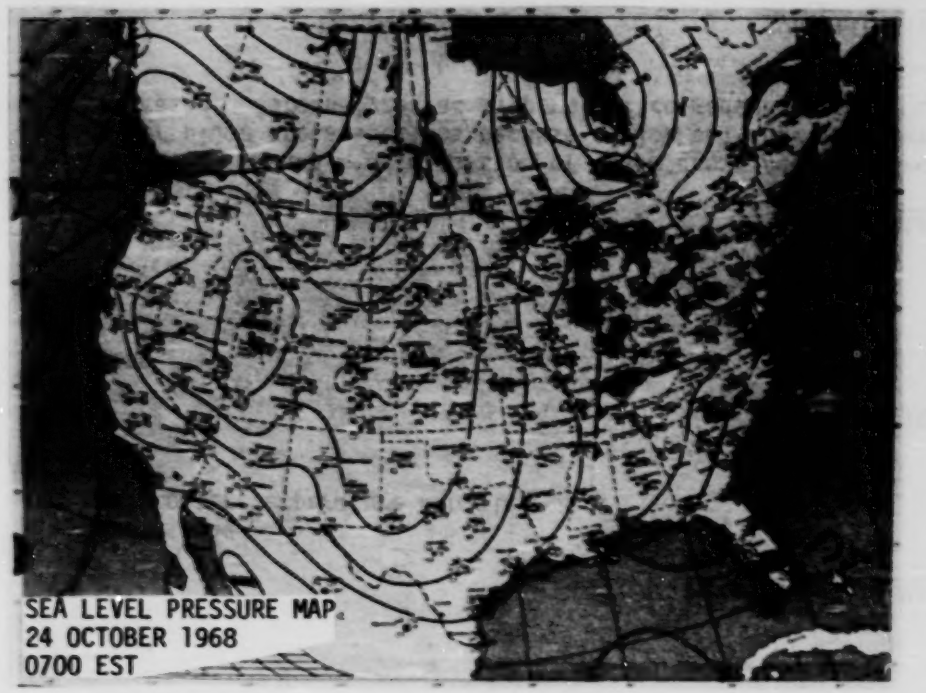
Ground-level flights discontinued to repair defective temperature recorder. Bubblers were set out but not analyzed because plume shifted away.

Synoptic Situation

Regional - Lows over James Bay and Carolinas; weak gradient over eastern U.S. Surface wind calm. Closed 500-mb low north of Lake Superior with trough to southern Texas. Wind at 500 mb SW 20 mps.

Local - Sunrise broken middle clouds. Surface inversion to 350 meters; lapse above to 1040 meters. Plume wind SE 6 mps. 11 AM middle overcast with haze. Slight inversion at 650 meters; near-neutral below and above to 1050 meters. Plume wind SE 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY



SEA LEVEL PRESSURE MAP
24 OCTOBER 1968
0700 EST

500 MB HEIGHT CHART
24 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 25 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections

On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosonde
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Top of 10-km and middle portion of 16-km cross sections incomplete because of clouds. Flights discontinued after plume cross sections because of low ceiling. Bubblers were not set out and afternoon radiosonde not released. Autoanalyzer at airport office measured plume GLC.

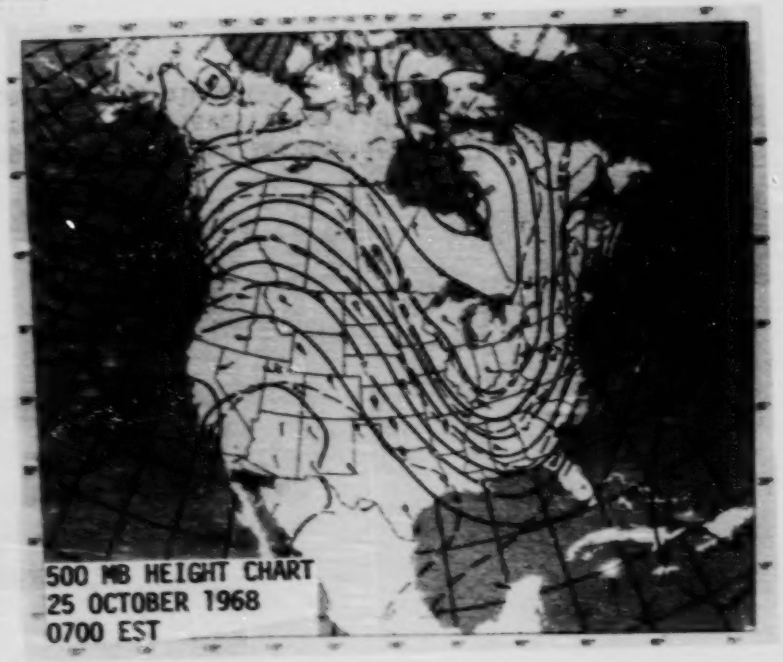
Synoptic Situation

Regional - Low over Long Island with front southwestward through Florida. Flat high centered over Texas. Surface wind light westerly. Closed 500-mb low over James Bay with trough to Gulf of Mexico. Wind at 500 mb SW 25 mps.

Local - Sunrise low overcast with fog. Stable to 300 meters; lapse above to 900 meters. Plume wind (from radiosonde) WSW 2 mps. 09 AM low overcast with fog. Slight inversion at 900 meters; lapse below and above to 1035 meters. Plume wind W 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
25 OCTOBER 1968
0700 EST



500 MB HEIGHT CHART
25 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 26 October 1968 Keystone Plume Unit #2

SO2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Steam Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Plume cross sections flown during intermittent light snow. Top of 16-km cross section incomplete because of low ceiling. Partial coverage of GLC by helicopter and bubblers. Ground-level flights discontinued because of strong low-level turbulence. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - High centered along Gulf coast dominating eastern half U.S. Surface wind W 5 mps. 500-mb low over Hudson Bay with trough southward to central Atlantic coast. Wind at 500 mb NW 12 mps.

Local - Sunrise low overcast with intermittent light snow showers. Slight inversion at 400 meters; lapse below and above to 1040 meters. Plume wind W 9 mps. 1030 AM low overcast with light rain and snow showers. Neutral to 740 meters. Plume wind WSW 7 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 29 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Steam Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Takeoff delayed by low ceiling. Tops of all three cross sections incomplete because of low ceiling; bottom of 16-km cross section incomplete because of flight restrictions over Indiana. Ground-level flights discontinued because of strong low-level turbulence. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - High over central Gulf states with ridge northward; weak trough over New England. Surface wind W 8 mps. Closed 500-mb low over Quebec with broad trough southward to Gulf of Mexico. Wind at 500 mb NW 25 mps.

Local - 10 AM low overcast with light rain and snow. Lapse to 550 meters. Plume wind WNW 8 mps. 1230 PM low overcast. Neutral to 850 meters. Plume wind WNW 8 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
29 OCTOBER 1968
0700 EST

500 MB HEIGHT CHART
29 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 30 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC

Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

16-km cross section flown during light snow. Ground-level flights discontinued because of weather. Bubblers were not set out. Autoanalyzer at airport office measured plume GLC.

Synoptic Situation

Regional - High dominating eastern U.S. with ridge from Hudson Bay to Florida. Surface wind NW 8 mps. Closed 500-mb low over eastern Quebec with trough southward along Atlantic coast; N-S ridge over Great Plains. Wind at 500 mb NW 20 mps.

Local - Sunrise low overcast with light snow showers. Lapse to 1050 meters. Plume wind WNW 7 mps. 11 AM broken low clouds with light rain showers. Near-neutral to 1050 meters. Plume wind NW 4 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
30 OCTOBER 1968
0700 EST

500 MB HEIGHT CHART
30 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 31 October 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
Portable Bubbler GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Takeoff delayed by frozen helicopter relay. No 16-km cross section attempted because of extreme plume width. Good coverage of GLC by helicopter and bubblers. Autoanalyzer at airport office measured plume GLC during wind shift around noon.

Synoptic Situation

Regional - High over Virginia dominating eastern third of U.S. Low over Nebraska with warm front to western Tennessee. Surface wind calm. Closed 500-mb low over eastern Quebec; N-S ridge over Mississippi Valley. Wind at 500 mb NW 20 mps.

Local - 08 AM clear with fog and haze. Surface inversion to 300 meters; lapse above to inversion at 1000 meters. Plume wind SSE 2 mps. 01 PM scattered high clouds. Slight inversion at 210 meters; near-neutral below and above to inversion at 1000 meters. Plume wind SSE 2 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
31 OCTOBER 1968
0700 EST

500 MB HEIGHT CHART
31 OCTOBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 1 November 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC

Portable Bubbler GCL
On-Steam Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles

Pilot Balloons
Airport Surface Data

Other Participants

Brookhaven National Laboratory (plume isotopic ratio measurements)

Commentary

Good coverage of GLC by helicopter and bubblers. Afternoon ground-level flight discontinued because of loss of oil pressure. Low-altitude termination of pilot-balloon runs caused by steam plume interference.

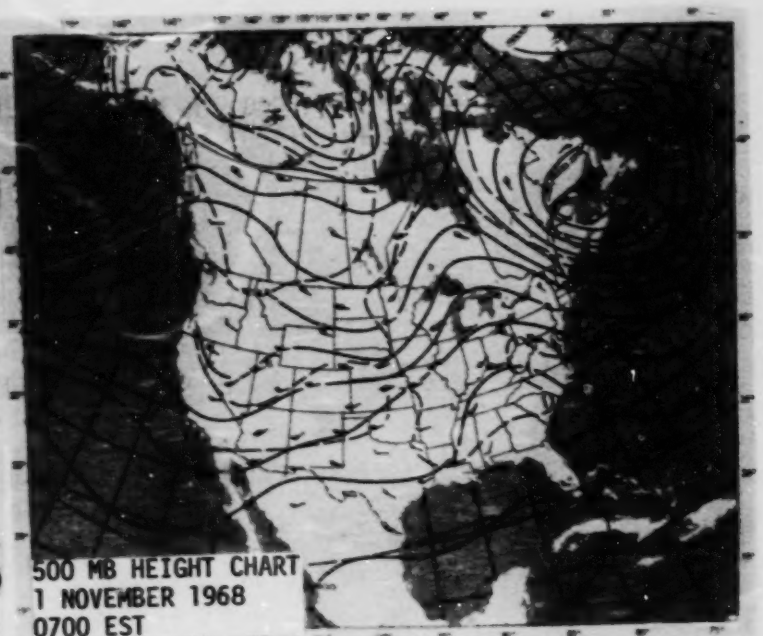
Synoptic Situation

Regional - Ridge along Atlantic coast; low over Wisconsin with warm front eastward to Lake Erie. Surface wind calm. Closed 500-mb low over Gulf of St. Lawrence; ridge from Georgia to Hudson Bay. Wind at 500 mb NW 15 mps.

Local - Sunrise scattered middle clouds with dense haze. Surface inversion to 650 meters; lapse above to 1010 meters. Plume wind SW 10 mps. Noon scattered low and high clouds with dense haze. Neutral to 650 meters; stable above with inversions to 1000 meters. Plume wind WSW 6 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
1 NOVEMBER 1968
0700 EST



500 MB HEIGHT CHART
1 NOVEMBER 1968
0700 EST

Table 1. (continued) DAILY EXPERIMENT SUMMARY

October 1968 Series 2 November 1968 Keystone Plume Unit #2

SO_2 Measurements

Plume Cross Sections
Helicopter Peak GLC
Helicopter Instantaneous GLC
On-Stream Autoanalyzer GLC

Meteorological Measurements

Radiosondes
Helicopter Temperature Profiles
Pilot Balloons
Airport Surface Data

Other Participants

None

Commentary

Takeoff delayed by low stratus and steam plume interference. No 16-km cross section attempted because of low fuel. Ground-level flights discontinued because plume was diffusing upward. Bubblers were not set out.

Synoptic Situation

Regional - Surface ridge from Dakotas to south Atlantic states; weak front NE-SW across Pennsylvania to Oklahoma. Surface wind light southwesterly. Zonal 500-mb flow across eastern U.S.; closed low over eastern Ontario. Wind at 500 mb W 20 mps.

Local - Sunrise low overcast with fog and haze. Lapse to 600 meters; stable above with inversions to 1035 meters. Plume wind W 7 mps. 01 PM high overcast with haze. Neutral to 1040 meters. Plume wind W 10 mps.

Table 1 (continued). DAILY EXPERIMENT SUMMARY

SEA LEVEL PRESSURE MAP
2 NOVEMBER 1968
0700 EST

500 MB HEIGHT CHART
2 NOVEMBER 1968
0700 EST

SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

Table 2 presents hourly meteorological and SO_2 measurements made at Jimmy Stewart Airport for each series day. Although experimental activities lasted less than 12 hours in most instances, values for the entire 24 hours are included. Daily precipitation totals, average and peak SO_2 concentrations, and total radiation are also presented.

On the majority of days, SO_2 concentrations are not available for a few hours during the afternoon. This loss of data occurred while the Technicon Autoanalyzer was switched from on-stream monitoring to bubbler analysis. Surface temperature and relative humidity measurements are missing for the period of May 5-11.

Table 2. SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

Symbols

Time (EST)	:	Hour designating preceding 60 minutes.
Dir (°)	:	Surface wind direction in whole degrees of azimuth.
Speed (mps)	:	Surface wind speed to nearest tenth meter per second.
Temp (°C)	:	Temperature to nearest tenth degree Centigrade.
RH (%)	:	Relative humidity in whole percent.
P (cm)	:	Precipitation to nearest hundredth centimeter.
SO_2 Avg	:	Hourly average SO_2 concentration to nearest part per hundred million by volume.
SO_2 Peak	:	Hourly peak SO_2 concentration to nearest part per hundred million by volume.
Ly/min	:	Total sun and sky radiation to nearest hundredth langley per minute.
Day	:	1. Daily average SO_2 concentration to nearest part per hundred million. Daily average not computed if more than 6 hours data were missing. 2. Daily peak SO_2 concentration to nearest part per hundred million. Daily peak not listed if more than 6 hours data were missing. 3. Daily total sun and sky radiation in whole langleys.
Var	:	Surface wind direction variable.
Calm	:	Surface wind speed less than threshold of Aerovane.
---	:	Missing data.

Table 2. SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

14 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	233	4.1	- 9.9	68		3	4	
0200	237	3.6	- 9.9	68		5	6	
0300	218	3.6	-10.5	69		7	8	
0400	229	3.5	- 9.9	69		9	11	
0500	237	3.3	- 9.9	67		9	11	
0600	240	1.9	-10.5	68		7	8	
0700	235	1.5	-11.0	74		6	6	
0800	229	2.4	- 9.3	73		6	-	.21
0900	229	2.6	- 6.6	65		-	-	.51
1000	238	3.0	- 4.9	57		-	-	.75
1100	218	4.5	- 3.8	55		-	-	.98
1200	223	4.6	- 2.1	51		-	-	1.10
1300	243	4.9	- 1.0	44		-	-	1.12
1400	239	4.5	- 0.5	41		-	-	1.04
1500	254	3.7	0.0	38		4	5	.91
1600	216	2.9	0.6	36		5	6	.70
1700	209	3.1	0.6	36		3	3	.46
1800	238	2.1	0.0	37		2	2	.18
1900	Var	0.5	- 1.6	45		2	2	
2000	092	1.1	- 2.7	53		3	3	
2100	106	1.8	- 3.8	57		3	4	
2200	134	3.0	- 2.7	53		3	4	
2300	140	5.4	- 1.0	45		1	2	
2400	139	6.3	- 0.5	41		1	2	
Day						4	-	477

15 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	148	4.4	- 0.5	40		3	3	
0200	135	4.4	0.6	39		2	3	
0300	137	5.3	0.6	38		1	1	
0400	133	4.6	0.6	38		1	2	
0500	139	5.0	0.6	38		2	2	
0600	142	4.2	0.0	38		2	2	
0700	141	3.4	1.7	39		3	3	
0800	144	2.0	2.8	37		3	4	.23
0900	160	3.5	6.1	33		3	5	.46
1000	167	3.1	6.7	30		2	3	.69
1100	210	6.9	7.8	29		1	1	.73
1200	221	6.3	8.3	29		1	1	.61
1300	224	6.8	10.0	29		1	1	.92
1400	190	6.6	11.1	28		-	-	.96
1500	202	5.0	11.1	29		-	-	.75
1600	213	6.2	11.1	30		-	-	.53
1700	162	5.9	10.0	29		-	-	.36
1800	144	6.3	8.3	30		1	1	.17
1900	150	5.8	6.1	32		1	2	
2000	152	6.8	6.1	36		1	1	
2100	144	6.7	5.6	38		1	2	
2200	158	6.2	5.6	38		2	3	
2300	161	5.2	5.6	39		3	6	
2400	170	2.9	5.0	40		4	6	
Day						2	6	385

16 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	168	4.4	5.6	41		3	5	
0200	126	2.8	5.0	42		3	3	
0300	107	2.3	4.4	44		2	4	
0400	137	2.8	5.0	44		2	3	
0500	144	4.6	5.6	43		3	3	
0600	142	4.9	5.6	44		4	5	
0700	150	3.7	6.1	60		3	3	
0800	172	2.8	5.6	79	.05	2	3	
0900	159	4.1	6.1	83		1	3	.09
1000	143	3.4	6.7	85	.03	2	3	.11
1100	152	3.3	7.2	89	.03	1	3	.16
1200	151	3.8	7.2	92	.10	2	3	.17
1300	140	3.4	7.2	92	.03	-	-	.10
1400	140	4.4	6.7	93	.10	-	-	.10
1500	155	2.3	7.2	95	.25	-	-	.05
1600	088	1.3	6.7	96	.31	2	3	.04
1700	Var	0.7	6.7	96	.38	3	3	.02
1800	149	1.1	6.7	96	.25	2	2	
1900	190	2.4	6.1	96	.10	2	3	
2000	189	3.4	6.1	96	.10	2	3	
2100	222	3.0	6.1	96	.03	2	3	
2200	198	3.1	6.1	96		1	2	
2300	224	3.4	5.6	95		1	1	
2400	291	4.5	4.4	95	.03	2	2	
Day					1.79	2	5	50

18 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	345	4.0	1.1	64		1	2	
0200	334	2.6	0.6	68		1	1	
0300	353	1.5	- 1.0	76		1	1	
0400	316	1.1	- 2.1	85		1	1	
0500	289	2.1	- 2.1	90		1	1	
0600	309	2.1	- 2.1	90		1	1	
0700	287	1.3	- 2.1	89		1	3	
0800	319	2.0	- 1.6	90		2	2	.24
0900	336	3.0	1.1	80		1	1	.49
1000	344	3.4	3.3	60		1	1	.76
1100	342	4.2	6.7	45		1	1	.97
1200	351	5.2	8.9	32		-	-	1.06
1300	001	5.9	11.7	25		-	-	1.09
1400	003	6.2	13.9	20		-	-	1.04
1500	002	5.9	14.4	20		-	-	.90
1600	360	5.3	14.4	20		-	-	.69
1700	352	4.9	14.4	22		-	-	.44
1800	006	4.3	13.3	28		2	-	.18
1900	027	3.3	11.1	38		2	2	
2000	023	2.1	7.8	50		2	2	
2100	021	1.9	7.2	57		1	2	
2200	019	2.3	5.6	65		1	2	
2300	020	1.8	3.3	78		1	1	
2400	047	1.6	1.7	87		1	1	
Day						1	-	472

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

19 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	092	0.8	0.6	92		1	1	
0200	061	1.0	- 0.5	94		1	1	
0300		Calm	- 0.5	96		1	1	
0400	073	1.4	- 1.6	98		1	1	
0500	031	1.4	- 1.6	98		2	5	
0600	087	1.7	- 2.1	98		3	4	
0700	079	1.6	- 1.0	97		4	5	.06
0800		Calm	1.7	93		3	-	.27
0900	161	1.4	3.9	72		8	11	.41
1000	215	2.6	6.7	58		4	-	.44
1100	222	2.8	8.9	50		1	2	.48
1200	222	2.6	12.2	42		1	2	.90
1300	260	2.2	14.4	32		2	3	.98
1400	222	1.9	16.1	31		2	2	.92
1500	275	1.6	17.2	30		1	1	.73
1600	Var	2.0	17.8	28		1	1	.56
1700	259	1.5	17.2	29		1	1	.34
1800	285	1.6	15.6	30		1	2	.17
1900	Var	0.3	12.2	36		2	2	
2000	081	1.5	8.9	43		2	5	
2100	084	1.4	7.2	52		5	11	
2200	118	1.4	6.1	61		3	4	
2300	117	1.5	5.6	73		3	4	
2400	082	2.1	6.1	68		6	12	
Day						2	12	374

20 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	087	2.5	8.9	54		8	12	
0200	168	4.4	10.6	48	.03	3	9	
0300	177	3.6	10.6	46	.03	5	8	
0400	181	2.9	10.0	46		3	3	
0500	235	3.1	8.9	52		3	3	
0600	180	1.2	8.3	61		3	3	
0700	167	0.5	8.3	64		3	3	
0800	240	1.1	8.3	65		3	5	.03
0900	202	1.4	8.9	77	.03	4	5	.05
1000	204	1.8	9.4	73	.03	5	5	.09
1100	244	1.5	10.6	67		3	5	.22
1200	218	2.5	11.7	67	.03	3	-	.43
1300	214	2.7	14.4	67		-	-	.92
1400	250	3.1	16.1	57		-	-	.57
1500	256	3.6	17.8	45		-	-	.28
1600	297	3.6	16.7	53		4	7	.02
1700	320	3.4	15.0	67		7	9	
1800	253	2.5	13.9	74		5	6	
1900	254	2.1	13.3	80		5	6	
2000	Var	0.3	12.8	91		5	6	
2100	317	0.4	11.1	91		4	5	
2200	295	1.7	11.1	91		2	2	
2300	353	0.6	10.6	94		2	2	
2400	014	2.1	10.0	93		2	2	
Day					.15	4	12	157

25 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	249	1.7	- 4.9	79		3	3	
0200	227	1.2	- 5.5	84		2	3	
0300	236	2.0	- 5.5	88		2	2	
0400	224	1.7	- 4.9	88		3	3	
0500	202	1.7	- 5.5	89		4	6	
0600	218	2.3	- 4.9	90		8	9	
0700	227	2.1	- 4.9	91		-	-	.06
0800	219	3.6	- 3.2	90		-	-	.24
0900	220	4.8	- 0.5	82		-	-	.47
1000	225	4.9	2.2	71		-	-	.72
1100	226	5.2	3.9	61		-	-	.95
1200	224	4.8	5.6	65		-	-	1.04
1300	227	5.0	8.3	43		-	-	1.03
1400	224	3.9	11.1	38		-	-	1.01
1500	221	3.4	11.7	37		-	-	.91
1600	232	3.8	11.7	35		-	-	.73
1700	231	4.6	11.7	35		-	-	.48
1800	226	4.0	11.1	35		-	-	.20
1900	222	1.9	9.4	38		1	1	.02
2000		Calm	6.7	47		1	1	
2100	092	0.5	4.4	53		2	3	
2200	092	0.9	2.8	69		5	8	
2300	086	1.2	2.2	64		6	8	
2400	101	1.1	2.8	64		3	6	
Day						-	-	470

26 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	084	0.8	4.4	58		2	2	
0200	101	1.7	3.3	58		6	10	
0300	093	1.3	2.8	61		7	9	
0400	109	1.7	2.8	58		9	12	
0500	108	1.8	3.9	52		7	8	
0600	113	2.9	3.9	48		6	7	
0700	134	1.6	5.6	46		6	7	.03
0800	149	1.5	5.6	45		6	6	.18
0900	157	2.8	8.3	40		5	6	.42
1000	209	5.0	12.2	34		2	5	.77
1100	214	6.3	13.9	29		1	1	.97
1200	232	7.7	15.0	26		1	1	1.08
1300	235	6.7	16.7	26		1	2	1.06
1400	226	7.5	17.2	24		-	-	.85
1500	223	7.0	16.7	22		-	-	.69
1600	198	8.0	17.2	23		-	-	.28
1700	255	6.9	16.1	24		-	-	.07
1800	322	5.4	13.9	27		1	1	.05
1900	037	3.4	10.6	50		1	1	
2000	036	4.6	9.4	64		1	1	
2100	165	3.5	9.4	68	.03	1	1	
2200	162	4.6	8.9	76	.03	1	1	
2300	175	2.8	8.9	73	.03	1	1	
2400	138	3.6	8.3	78	.03	2	3	
Day					.12	3	12	386

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

27 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	Var	2.5	8.9	75		2	3	
0200	167	2.4	7.8	83		2	2	
0300	219	2.1	7.2	80		3	4	
0400	210	3.1	6.1	88		2	3	
0500	220	3.6	6.1	92		1	1	
0600	226	2.1	6.7	94		1	1	
0700	234	1.5	5.6	95		1	1	.04
0800	225	2.7	7.2	96		1	1	.22
0900	236	3.6	9.4	88		5	8	.49
1000	235	3.5	12.2	72		7	8	.73
1100	222	2.9	16.1	58		7	8	.92
1200	233	3.6	17.8	45		6	7	.83
1300	262	6.2	18.3	45		4	5	.70
1400	284	5.9	19.4	41		-	-	.80
1500	269	3.4	20.0	40		-	-	.75
1600	249	5.7	20.6	35		-	-	.58
1700	240	5.4	20.0	32		-	-	.28
1800	238	3.[illegible]	19.4	32		-	-	.15
1900	223	1.7	16.7	34		-	-	.02
2000		Calm	13.9	40		-	-	
2100	102	1.0	11.7	49		-	-	
2200	078	0.5	10.0	52		-	-	
2300	091	0.5	9.4	60		-	-	
2400	064	0.9	9.4	60		-	-	
Day						-	-	391

28 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	121	0.6	10.0	54		-	-	
0200	119	1.3	10.6	52		-	-	
0300	132	1.7	10.6	51		-	-	
0400	124	0.5	10.0	51		-	-	
0500	125	0.7	8.9	53		-	-	
0600	204	1.2	7.8	57		-	-	
0700	162	1.8	7.2	66		-	-	.03
0800	210	2.5	9.4	64		-	-	.16
0900	207	4.0	12.2	52		-	-	.42
1000	212	4.8	15.6	44		-	-	.74
1100	231	6.9	18.3	48		-	-	.93
1200	217	8.8	19.4	48		-	-	1.00
1300	237	9.4	20.0	47		-	-	.85
1400	240	9.4	20.6	43		-	-	.83
1500	236	9.0	20.6	31		-	-	.66
1600	234	7.5	20.6	31		-	-	.38
1700	235	6.7	19.4	34		1	2	.18
1800	242	6.3	19.4	35		1	2	.15
1900	238	3.9	17.2	40		2	4	.01
2000	237	2.9	15.6	47		2	2	
2100	239	2.3	12.8	56		2	2	
2200	215	1.7	11.1	67		2	2	
2300	226	0.9	10.0	71		2	2	
2400	217	1.7	8.9	80		3	3	
Day						-	-	379

29 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	219	1.7	8.9	78		2	3	
0200	206	2.6	8.9	78		1	2	
0300	207	2.9	9.4	76		2	2	
0400	216	2.9	10.0	74		2	2	
0500	214	4.0	10.6	74		2	2	
0600	216	3.5	10.6	77		2	2	
0700	203	3.8	11.1	78		2	2	.05
0800	204	4.6	13.3	72		2	2	.26
0900	208	6.3	15.6	62		2	3	.53
1000	221	7.8	17.8	58		2	2	.75
1100	215	7.3	19.4	49		2	2	.92
1200	217	7.2	20.6	47		3	3	.92
1300	234	7.9	21.7	43		3	4	1.02
1400	238	8.9	22.2	38		-	-	.79
1500	241	8.2	20.0	38	.13	-	-	.22
1600	226	6.3	15.6	56	.03	-	-	.12
1700	210	4.6	15.6	70		0	0	.14
1800	206	6.2	13.9	80	.03	1	1	.08
1900	209	4.4	12.8	82		1	1	
2000	209	4.1	12.8	82		0	1	
2100	227	2.6	11.7	82		0	0	
2200	231	1.8	10.6	90		1	1	
2300	313	1.6	10.6	70		2	3	
2400	312	2.2	10.0	55		1	2	
Day					.19	2	4	346

30 March 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	329	1.6	8.3	60		0	1	
0200	030	0.6	6.1	70		0	0	
0300	060	0.4	3.9	75		0	0	
0400	110	0.5	2.2	82		0	0	
0500	076	0.8	0.6	89		0	1	
0600	075	0.2	0.0	96		1	1	
0700	090	0.4	1.1	93		1	1	.12
0800	209	0.9	6.1	72		-	-	.36
0900	212	1.3	10.0	51		-	-	.61
1000	245	1.2	11.7	33		-	-	.85
1100	332	2.0	13.3	22		-	-	1.07
1200	Var	1.9	13.9	22		-	-	1.16
1300	270	1.7	15.0	21		-	-	1.17
1400	Var	1.6	16.1	20		-	-	1.11
1500	234	2.1	16.7	20		-	-	.97
1600	258	2.4	17.2	19		-	-	.78
1700	219	2.7	17.2	18		-	-	.53
1800	Var	0.6	16.7	18		1	1	.25
1900		Calm	13.9	19		1	1	.03
2000	064	1.1	10.0	27		1	3	
2100	089	1.0	8.3	35		2	2	
2200	084	1.9	6.1	44		2	3	
2300	085	2.3	5.6	52		3	4	
2400	075	2.2	5.6	43		3	3	
Day						-	-	540

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

1 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	328	8.5	6.1	94	.10	0	0	
0200	324	6.1	5.0	88	.13	0	0	
0300	292	5.9	2.8	89	.20	0	0	
0400	317	4.2	2.2	89	.08	0	0	
0500	293	4.9	1.7	89		0	1	
0600	290	5.2	1.1	88		3	3	
0700	289	5.1	0.6	67		2	3	.05
0800	282	5.2	0.6	68		1	3	.36
0900	289	5.5	1.7	58		1	1	.65
1000	288	5.4	2.8	52		1	1	.90
1100	292	6.7	3.9	45		1	2	1.09
1200	298	6.1	4.4	42		?	1	1.04
1300	299	7.2	5.6	37		-	-	1.22
1400	294	7.8	6.1	35		-	-	1.22
1500	304	6.3	6.7	33		-	-	1.22
1600	302	7.0	6.7	31		-	-	1.08
1700	306	6.2	5.6	30		-	-	.89
1800	307	4.4	4.4	30		-	-	.62
1900	313	3.0	2.8	31		-	-	.33
2000	292	1.8	1.1	35		-	-	.12
2100	292	1.4	0.0	40		-	-	
2200	309	0.8	- 1.6	51		-	-	
2300	298	0.8	- 2.7	64		-	-	
2400	Var	1.6	- 3.2	66		-	-	
Day						-	-	647

2 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	110	0.3	- 3.8	68		-	-	
0200		Calm	- 4.9	72		-	-	
0300		Calm	- 4.9	77		-	-	
0400		Calm	- 4.9	78		-	-	
0500		Calm	- 5.5	82		-	-	
0600		Calm	- 4.3	79		-	-	
0700		Calm	- 3.2	82		-	-	.14
0800		Calm	- 1.0	78		-	-	.41
0900	206	2.2	3.3	50		-	-	.60
1000	229	1.8	6.7	35		-	-	.83
1100	Var	1.2	9.4	26		-	-	1.04
1200	Var	1.2	10.6	24		-	-	1.12
1300	277	1.5	12.2	22		-	-	1.13
1400	269	1.7	13.3	21		-	-	1.08
1500	237	1.8	13.3	20		-	-	.94
1600	188	1.8	13.9	18		-	-	.70
1700	218	2.1	14.4	19		-	-	.55
1800	309	0.6	13.3	20		0	1	.22
1900	160	2.4	11.1	22		1	3	.03
2000	148	3.3	8.9	23		0	1	
2100	141	3.4	8.9	24		0	0	
2200	141	4.0	8.9	24		0	1	
2300	142	3.3	8.3	25		3	7	
2400	140	1.1	7.2	28		3	5	
Day						-	-	527

3 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	129	1.1	7.2	29		3	4	
0200	124	1.3	6.7	31		3	3	
0300	094	1.2	6.1	32		3	5	
0400	082	0.8	5.6	37		7	10	
0500	081	1.2	5.0	40		3	6	
0600	081	0.8	3.9	48		3	3	
0700	075	1.3	5.6	51		4	4	.03
0800	073	1.2	8.3	42		-	-	.16
0900	127	0.7	13.3	31		-	-	.63
1000	Var	1.1	15.6	26		-	-	.85
1100	Var	1.2	17.2	26		-	-	1.07
1200	186	3.1	18.3	22		-	-	1.08
1300	184	4.0	19.4	22		-	-	1.11
1400	193	2.3	20.0	24		-	-	.98
1500	196	3.4	19.4	26		-	-	.47
1600	223	5.7	17.2	39		-	-	.15
1700	215	5.5	15.6	52		-	-	.15
1800	200	3.8	14.4	61		0	0	.07
1900	196	3.7	13.9	68		0	0	.04
2000	204	3.4	13.3	72		0	0	
2100	194	2.0	13.3	70		1	4	
2200	152	3.7	13.3	70		1	4	
2300	167	3.7	13.3	62		2	4	
2400	170	2.4	12.2	66		3	4	
Day						-	-	406

4 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	148	4.3	12.2	66		3	7	
0200	140	5.2	12.8	68		2	3	
0300	147	4.7	13.3	69		2	3	
0400	145	4.6	13.3	68		3	4	
0500	148	3.5	13.9	68		2	2	
0600	154	5.0	15.6	65		1	2	
0700	185	6.5	16.7	59		0	1	.02
0800	210	7.8	16.1	69	.05	-	-	.01
0900	217	7.7	14.4	88	.05	-	-	.03
1000	207	7.6	15.0	82	.05	-	-	.14
1100	193	9.8	16.7	64	.03	-	-	.22
1200	201	11.6	17.2	60	.03	-	-	.42
1300	205	10.3	16.7	60	.03	-	-	.29
1400	190	9.7	16.7	67	.03	-	-	.22
1500	210	9.3	16.1	70		0	0	.17
1600	191	10.3	15.6	70		0	0	.12
1700	193	10.5	15.0	67		0	0	.09
1800	199	11.1	15.0	63		0	0	.05
1900	212	10.7	15.6	58		0	1	
2000	220	9.8	14.4	66		0	0	
2100	216	9.9	14.4	70		0	0	
2200	209	8.9	14.4	74		0	0	
2300	217	7.2	14.4	78		0	0	
2400	249	8.9	13.3	77		0	0	
Day					.27	-	-	108

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

10 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	---	---	2.7	56		-	-	
0200	---	---	1.7	61		-	-	
0300	---	---	1.1	66		-	-	
0400	---	---	1.1	71		-	-	
0500	---	---	- 0.5	81		-	-	
0600	---	---	- 1.0	90		-	-	
0700	---	---	1.1	91		-	-	.12
0800	---	---	4.4	72		-	-	.35
0900	---	---	9.4	48		-	-	.58
1000	---	---	12.2	39		-	-	.81
1100	---	---	14.4	31		-	-	.92
1200	---	---	15.0	30		2	2	.87
1300	260	4.6	14.4	30		3	3	.66
1400	262	6.3	12.8	37		2	2	.39
1500	300	5.9	12.8	38		2	2	.39
1600	292	5.1	10.6	57	.03	-	-	.26
1700	292	2.3	8.9	75		1	1	.16
1800	Var	1.7	8.3	84	.05	1	2	.12
1900	298	5.1	7.8	84	.23	1	1	.06
2000	278	4.3	5.6	95	.08	0	0	
2100	092	0.7	5.6	98	.03	0	0	
2200	255	1.3	5.6	98		0	1	
2300	251	1.2	5.6	98		1	1	
2400	339	1.6	5.0	97		0	1	
Day					.42	-	-	340

11 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	339	1.1	3.9	96		0	1	
0200	293	1.2	3.3	97		0	0	
0300	249	1.1	3.3	97		0	1	
0400	261	1.0	1.7	97	.03	1	1	
0500	168	0.6	- 0.5	98		1	1	
0600	105	0.7	- 1.0	98		1	2	
0700	315	0.9	0.6	98		1	1	.13
0800	320	1.7	3.3	92		1	1	.39
0900	348	2.6	5.6	75		1	1	.67
1000	011	3.5	7.2	59		1	1	.90
1100	006	3.4	8.3	48		1	1	1.12
1200	352	3.5	10.0	41		1	1	1.19
1300	346	4.6	11.1	32		1	1	1.24
1400	325	4.5	11.7	30		0	0	1.19
1500	315	4.6	12.2	27		1	1	1.06
1600	297	4.4	13.3	27		0	0	.86
1700	305	3.8	12.8	23		0	0	.59
1800	285	5.1	12.2	27		0	0	.31
1900	271	3.9	9.4	31		0	1	.06
2000	265	2.3	6.7	40		0	1	
2100		Calm	5.0	52		1	1	
2200	092	0.5	3.9	58		1	1	
2300	103	0.8	2.8	61		1	1	
2400	095	0.6	1.7	69		3	4	
Day					.03	1	4	581

12 April 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	093	0.5	0.6	81		3	3	
0200	084	1.0	0.0	87		3	3	
0300	087	1.2	- 0.5	91		3	3	
0400	090	0.9	- 1.0	96		2	3	
0500	100	1.3	- 1.6	96		3	6	
0600	090	1.7	- 1.6	94		3	3	
0700	113	1.3	0.0	84		3	4	.14
0800	203	1.8	4.4	63		3	5	.38
0900	225	4.6	9.4	41		5	7	.64
1000	233	4.2	11.7	34		3	5	.87
1100	245	5.4	13.9	29		2	3	1.04
1200	230	3.3	16.1	28		1	3	1.11
1300	231	3.2	17.2	26		1	1	1.13
1400	219	3.4	18.3	25		1	1	1.08
1500	228	3.8	19.4	24		-	-	.98
1600	223	2.8	20.0	24		-	-	.79
1700	219	3.4	20.0	24		1	1	.51
1800	231	3.0	19.4	24		1	1	.30
1900	199	2.4	17.2	29		1	1	.10
2000	207	1.2	15.0	31		1	2	
2100	210	3.5	11.7	41		2	4	
2200	221	3.1	10.6	44		3	4	
2300	094	1.7	8.3	56		3	4	
2400	084	1.1	8.9	52		3	4	
Day						2	7	543

5 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	350	2.9	---	--		6	13	
0200	Var	2.1	---	--		1	1	
0300	049	1.7	---	--		1	1	
0400	057	2.6	---	--		1	1	
0500	019	1.9	---	--		1	1	
0600	006	4.3	---	--		1	1	.03
0700	050	4.9	---	--		1	1	.15
0800	067	5.6	---	--		1	1	.29
0900	064	5.3	---	--		1	1	.34
1000	045	3.7	---	--		1	1	.45
1100	032	2.8	---	--		1	1	.16
1200	012	3.9	---	--		1	1	.21
1300	008	5.1	---	--		1	1	.37
1400	012	4.9	---	--		1	1	.22
1500	027	3.1	---	--		1	1	.35
1600	009	3.6	---	--		1	1	.87
1700	338	3.2	---	--		1	1	.22
1800	335	3.0	---	--		1	1	.12
1900	331	2.1	---	--		1	1	.04
2000	324	3.3	---	--		1	1	
2100	328	3.2	---	--		0	0	
2200	326	2.3	---	--		0	0	
2300	324	2.9	---	--		0	1	
2400	332	1.8	---	--		1	1	
Day						1	13	228

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

6 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	333	2.1	---	--		1	1	
0200	340	1.5	---	--		1	2	
0300	Var	0.6	---	--		1	1	
0400		Calm	---	--		0	0	
0500	Var	0.9	---	--		2	6	
0600	223	1.0	---	--		4	6	.04
0700	227	1.3	---	--		3	3	.27
0800	250	1.5	---	--		4	5	.54
0900	314	2.2	---	--		2	3	.82
1000	330	2.6	---	--		1	2	1.00
1100	333	3.8	---	--		1	1	1.21
1200	304	44	---	--		1	-	1.28
1300	311	4.3	---	--		-	-	1.32
1400	301	3.5	---	--		-	-	1.30
1500	298	4.3	---	--		-	-	1.15
1600	311	4.4	---	--		-	-	.98
1700	287	5.1	---	--		0	1	.77
1800	290	3.8	---	--		1	1	.41
1900	302	3.5	---	--		1	1	.13
2000	322	2.6	---	--		1	1	
2100	296	1.6	---	--		1	1	
2200	336	0.5	---	--		1	1	
2300	340	1.0	---	--		1	1	
2400	071	0.8	---	--		1	1	
Day						1	6	672

7 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	084	1.2	---	--		3	6	
0200	076	1.2	---	--		1	3	
0300	075	1.1	---	--		1	1	
0400	Var	0.7	---	--		2	4	
0500	083	1.2	---	--		3	4	
0600	090	1.4	---	--		3	5	.07
0700	066	1.1	---	--		3	3	.38
0800	065	1.3	---	--		1	1	.56
0900	076	2.5	---	--		1	1	.80
1000	067	3.0	---	--		1	1	1.06
1100	064	1.9	---	--		1	1	1.19
1200	032	1.9	---	--		2	3	---
1300	Var	2.1	---	--		-	-	---
1400	Var	2.2	---	--		-	-	---
1500	Var	1.8	---	--		-	-	1.08
1600	359	2.0	---	--		-	-	.85
1700	013	1.8	---	--		0	0	.63
1800	055	1.6	---	--		0	0	.37
1900	077	2.2	---	--		0	0	.10
2000	097	1.9	---	--		3	5	
2100	103	1.2	---	--		2	4	
2200	089	2.6	---	--		2	3	
2300	080	2.3	---	--		2	2	
2400	078	2.2	---	--		2	2	
Day						2	6	---

8 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	127	3.3	---	--		1	1	
0200	148	5.6	---	--		1	1	
0300	156	5.9	---	--		0	0	
0400	172	4.2	---	--		1	2	
0500	165	3.5	---	--		2	3	
0600	142	2.5	---	--		2	3	.03
0700	157	2.8	---	--		2	2	.24
0800	157	3.7	---	--		4	6	.40
0900	169	3.8	---	--		3	5	.63
1000	162	4.1	---	--		2	3	.91
1100	195	3.3	---	--		1	1	1.08
1200	214	3.5	---	--		1	1	1.05
1300	221	2.9	---	--		-	-	1.26
1400	221	4.2	---	--		-	-	1.25
1500	228	3.8	---	--		-	-	1.08
1600	223	4.0	---	--		-	-	.42
1700	205	3.5	---	--		0	0	.07
1800	151	2.2	---	--		0	1	.06
1900	141	3.7	---	--		0	0	.03
2000	137	4.1	---	--		0	0	
2100	136	5.3	---	--		0	0	
2200	143	5.7	---	--		0	0	
2300	144	5.1	---	--		1	2	
2400	179	3.9	---	--		2	3	
Day						1	6	508

9 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	285	2.4	---	--		1	1	
0200	317	0.9	---	--		1	1	
0300	146	0.6	---	--		1	1	
0400	136	2.6	---	--		1	2	
0500	138	3.3	---	--		1	1	
0600	149	3.6	---	--		2	3	.03
0700	170	3.6	---	--		-	-	.04
0800	190	2.7	---	--		-	-	.04
0900	199	5.2	---	--		1	1	.06
1000	203	6.1	---	--		-	-	.14
1100	207	5.7	---	--		-	-	.14
1200	206	6.5	---	--		0	0	.31
1300	200	7.5	---	--		0	0	.42
1400	221	7.0	---	--		0	0	.69
1500	227	7.3	---	--		0	0	.32
1600	207	6.5	---	--		0	0	.16
1700	208	6.8	---	--		0	0	.11
1800	207	6.8	---	--		0	0	.06
1900	214	3.7	---	--		0	0	
2000	219	4.2	---	--		0	?	
2100	214	3.8	---	--		0	1	
2200	212	3.8	---	--		1	1	
2300	219	6.4	---	--		1	1	
2400	236	4.1	---	--		1	1	
Day						1	3	152

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

10 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	224	3.7	---	--		1	1	
0200	227	3.8	---	--		1	1	
0300	224	3.3	---	--		1	2	
0400	238	2.9	---	--		3	3	
0500	234	2.2	---	--		4	4	
0600	234	3.0	---	--		4	5	.02
0700	259	2.4	---	--		5	7	.18
0800	249	3.1	---	--		5	7	.45
0900	282	3.8	---	--		4	5	.71
1000	284	4.0	---	--		1	2	.67
1100	304	3.3	---	--		1	2	.60
1200	289	3.8	---	--		1	1	.70
1300	280	3.8	---	--		-	-	.75
1400	279	3.7	---	--		-	-	.96
1500	279	4.0	---	--		-	-	.70
1600	289	3.5	---	--		-	-	.47
1700	294	3.0	---	--		0	0	.27
1800	297	2.6	---	--		0	0	.19
1900	299	1.4	---	--		0	1	.06
2000	344	0.7	---	--		1	1	
2100	Var	0.5	---	--		1	1	
2200	083	0.7	---	--		1	3	
2300	076	0.9	---	--		2	4	
2400	075	1.2	---	--		1	1	
Day						2	7	402

11 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	055	0.6	---	--		1	1	
0200	064	0.6	---	--		1	1	
0300		Calm	---	--		1	1	
0400	088	1.0	---	--		1	1	
0500	083	1.5	---	--		1	1	
0600	085	1.4	---	--		1	1	
0700		Calm	---	--		1	2	.05
0800	070	1.7	---	--		2	2	.16
0900	092	2.1	---	--		2	3	.20
1000	086	2.2	---	--		3	4	.13
1100	107	2.7	---	--		2	2	.11
1200	103	2.7	---	--		1	1	.16
1300	122	3.0	---	--		1	1	.20
1400	148	3.2	---	--		1	1	.11
1500	141	4.4	---	--		0	1	.17
1600	140	3.9	---	--		0	1	.15
1700	123	4.2	---	--		1	1	.09
1800	120	4.0	---	--		1	1	.04
1900	113	3.7	---	--		0	0	
2000	136	3.9	---	--		1	1	
2100	140	4.6	---	--		1	1	
2200	153	4.8	---	--		1	2	
2300	169	4.1	---	--		0	1	
2400	195	3.0	---	--		0	1	
Day						1	4	93

21 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	231	2.6	7.2	96		4	5	
0200	219	3.4	7.2	98		4	5	
0300	223	3.4	7.2	99		3	3	
0400	226	2.8	7.2	99		3	3	
0500	224	3.0	7.2	99		3	3	
0600	233	2.4	7.8	99		3	3	.05
0700	238	2.5	8.3	99		5	7	.05
0800	284	3.0	8.9	96		6	8	.11
0900	259	3.9	10.0	88		4	6	.25
1000	263	4.4	11.1	78		5	7	.40
1100	287	4.3	11.7	78	.03	4	7	.40
1200	267	3.2	13.3	75		3	3	.82
1300	276	5.1	12.8	64		3	-	.55
1400	255	4.5	11.7	70	.10	-	-	.35
1500	240	4.2	12.8	63		1	1	.66
1600	204	5.5	12.2	74		1	1	.76
1700	230	4.2	11.1	78		0	0	.28
1800	208	4.8	11.1	86		0	1	.25
1900	232	3.4	10.0	90	.28	1	1	.03
2000	204	4.1	8.9	99		1	2	
2100	207	2.6	8.3	99		1	2	
2200	208	2.1	7.8	99		1	1	
2300	214	1.7	7.8	99		1	1	
2400	205	1.4	6.7	99		1	1	
Day					.41	3	8	296

22 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	230	0.8	5.0	99		1	1	
0200	207	1.0	4.4	99		2	3	
0300	209	2.2	5.6	99		2	2	
0400	221	2.1	5.0	99		2	3	
0500	219	0.9	3.9	99		1	1	
0600	189	0.8	3.9	99		2	3	.06
0700	219	1.7	6.1	99		3	3	.24
0800	---	---	8.3	99		3	4	.43
0900	234	3.0	10.0	91		6	9	.60
1000	Var	1.4	12.2	78		10	15	.87
1100	295	2.0	14.4	60		6	9	1.12
1200	270	2.1	14.4	54		4	7	.90
1300	259	2.2	15.0	50		2	2	.49
1400	248	2.5	15.6	46		3	3	.66
1500	Var	5.7	18.3	60	.15	2	3	.10
1600	113	1.9	18.3	63		2	2	.85
1700	232	2.0	16.1	48		3	3	.62
1800	221	1.6	15.6	48		3	4	.23
1900	Var	0.9	14.4	54		2	2	.09
2000	088	0.8	11.7	81		2	2	
2100	094	1.1	9.4	96		-	-	
2200	078	1.2	8.9	98		-	-	
2300	083	1.2	8.9	93		2	3	
2400	082	0.7	8.3	92		2	2	
Day					.15	3	15	436

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

23 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	074	0.6	7.8	95		3	4	
0200	072	0.3	7.8	99		3	4	
0300	064	0.8	8.3	96		3	3	
0400	060	1.0	8.9	86		3	3	
0500	085	1.6	9.4	80		4	4	
0600	Var	1.1	9.4	83		2	2	.02
0700	075	1.2	9.4	92		2	3	.06
0800	109	1.8	10.0	93	.05	2	-	.06
0900	126	2.1	10.0	99	.05	-	-	.08
1000	097	3.3	10.0	99	.13	-	-	.12
1100	110	3.1	10.6	97		-	-	.10
1200	122	3.5	11.1	93		-	-	.20
1300	132	3.8	11.1	87	.03	-	-	.15
1400	109	2.5	11.1	95	.03	-	-	.09
1500	103	2.0	11.1	99	.08	-	-	.09
1600	092	2.2	11.1	99		-	-	.08
1700	097	2.0	11.1	99	.25	-	-	.06
1800	121	1.6	11.1	99	.20	-	-	.03
1900	081	2.3	11.1	99	.10	-	-	
2000	080	2.7	11.1	99		-	-	
2100	091	1.9	11.1	99		-	-	
2200	096	1.9	11.1	99		-	-	
2300	102	1.4	11.1	99		-	-	
2400	075	1.7	11.1	99		-	-	
Day					.92	-	-	68

25 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	086	1.5	5.6	99		0	1	
0200	025	1.7	4.4	99		0	0	
0300	034	1.5	3.9	99		0	0	
0400	055	1.5	2.8	99		0	1	
0500	053	1.3	3.3	99		0	0	
0600	062	1.3	6.1	99		1	1	.08
0700	085	1.6	10.0	86		1	1	.33
0800	084	2.6	13.3	58		1	1	.59
0900	073	3.7	15.0	51		1	1	.84
1000	072	3.9	16.1	45		0	0	1.08
1100	083	3.2	17.8	38		0	0	1.21
1200	Var	2.6	18.3	36		0	0	1.32
1300	Var	2.4	19.4	32		0	0	1.32
1400	Var	2.4	20.0	30		0	0	1.35
1500	Var	1.8	21.1	28		0	0	1.15
1600	073	1.9	21.1	26		0	0	1.01
1700	052	3.2	21.7	26		0	0	.67
1800	060	2.3	21.1	26		0	0	.48
1900	060	2.7	20.6	27		0	0	.19
2000	075	1.2	17.8	32		0	0	.03
2100	124	1.8	13.9	44		1	1	
2200	112	1.9	12.8	48		1	1	
2300	119	2.3	12.2	52		0	0	
2400	147	2.8	12.2	52		1	1	
Day						0	1	697

26 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	102	2.5	11.1	56		1	2	
0200	066	3.1	8.9	72		0	0	
0300	074	3.5	10.0	72		0	0	
0400	087	4.8	10.0	70		0	0	
0500	104	3.9	10.0	74		0	0	
0600	099	4.6	10.6	74		0	0	.08
0700	072	3.0	11.7	70		0	0	.31
0800	065	2.6	12.8	62		1	1	.50
0900	082	3.1	17.8	56		1	1	.81
1000	134	4.2	18.9	52		0	0	.94
1100	129	4.6	20.0	48		0	0	.78
1200	129	3.4	21.1	47		0	0	1.24
1300	138	4.0	22.2	46		-	-	1.31
1400	124	3.8	22.8	45		-	-	1.24
1500	081	4.0	22.8	45		0	-	.94
1600	107	4.1	22.2	45		0	0	.55
1700	097	4.4	21.1	45		0	0	.17
1800	097	4.2	20.0	48		0	0	.04
1900	106	3.8	18.9	51		0	0	.02
2000	103	3.5	18.3	53		0	0	
2100	105	3.6	17.8	56		0	1	
2200	106	2.5	17.8	56		0	0	
2300	104	3.1	17.8	54		0	0	
2400	115	4.2	17.2	54		0	0	
Day						0	2	535

27 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	116	4.4	17.2	56		1	1	
0200	125	5.7	16.7	57		0	1	
0300	112	4.5	16.1	57		1	1	
0400	118	5.9	15.0	62		1	1	
0500	104	5.8	11.1	84		1	1	
0600	080	7.2	9.4	83		0	1	.03
0700	100	6.4	8.3	82		1	1	.04
0800	101	6.0	7.2	85		0	0	.09
0900	093	5.3	7.2	90		0	0	.11
1000	087	5.2	7.2	88		0	0	.18
1100	090	4.7	7.2	90	.05	0	0	.21
1200	095	3.9	6.7	92	.10	0	0	.16
1300	098	4.7	6.7	91	.03	-	-	.20
1400	090	4.0	6.7	90	.13	-	-	.17
1500	107	3.6	8.9	79		-	-	.15
1600	110	4.1	8.3	75	.03	-	-	.09
1700	102	3.8	6.7	99	.38	-	-	.04
1800	104	4.6	6.1	99	.25	-	-	.04
1900	104	5.5	6.1	98	.20	-	-	.02
2000	104	3.8	5.6	99	.15	-	-	
2100	089	5.0	5.6	99	.03	-	-	
2200	092	5.0	5.6	98		-	-	
2300	089	4.5	5.6	96		-	-	
2400	092	4.1	5.6	97		-	-	
Day					1.35	-	-	92

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

28 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	088	3.5	5.6	98		-	-	
0200	089	3.6	5.6	99		-	-	
0300	096	2.8	6.1	99		-	-	
0400	088	3.2	6.7	98		-	-	
0500	094	3.4	7.2	94		-	-	
0600	084	2.7	7.8	92		-	-	
0700	085	3.0	7.8	92		-	-	.05
0800	083	4.1	8.3	92		-	-	.14
0900	082	4.0	8.9	92		-	-	.16
1000	090	3.8	8.9	95	.05	-	-	.20
1100	089	4.0	9.4	94	.03	-	-	.25
1200	101	4.6	10.0	93		-	-	.25
1300	097	3.8	11.1	88	.03	-	-	.25
1400	074	3.4	10.6	91		-	-	.30
1500	079	4.0	11.1	90		-	-	.35
1600	075	4.7	11.1	94		-	-	.30
1700	076	4.7	10.6	99		-	-	.14
1800	076	3.4	9.4	99		-	-	.08
1900	077	3.4	8.9	99	.03	-	-	.04
2000	081	3.7	8.9	99		-	-	
2100	074	3.5	8.9	99		-	-	
2200	077	3.9	8.3	99		-	-	
2300	070	3.4	8.3	99		-	-	
2400	072	2.9	8.3	99		-	-	
Day					.14	-	-	149

29 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	065	1.2	8.3	99		-	-	
0200	Var	0.7	8.3	99		-	-	
0300	047	0.9	7.2	99		-	-	
0400	052	0.6	6.1	99		-	-	
0500		Calm	5.6	99		-	-	
0600		Calm	5.6	99		-	-	.03
0700		Calm	7.8	99		-	-	.26
0800	189	1.6	9.4	99		-	-	.20
0900	216	2.5	12.2	77		-	-	.61
1000	224	3.0	15.0	70		-	-	.93
1100	232	2.7	16.7	66		-	-	1.16
1200	232	3.8	18.3	64		-	-	1.26
1300	234	4.2	19.4	52		-	-	1.35
1400	240	4.4	18.3	53		-	-	.17
1500	231	3.9	16.7	66	.08	-	-	.64
1600	211	3.0	17.8	67		-	-	.48
1700	232	5.5	17.8	67		-	-	.32
1800	229	4.7	17.8	54		-	-	.42
1900	242	2.8	16.7	68		-	-	.11
2000		Calm	14.4	89		-	-	
2100	081	1.4	11.7	99		-	-	
2200	090	0.7	11.1	99		-	-	
2300	Var	1.2	11.1	99		-	-	
2400		Calm	11.1	99		-	-	
Day					.08	-	-	475

30 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	150	0.7	11.1	99		-	-	
0200	186	1.1	11.1	99		-	-	
0300	163	1.2	11.1	99	.05	-	-	
0400	085	0.7	10.6	99		-	-	
0500		Calm	9.4	99		-	-	
0600	074	0.7	9.4	99		-	-	.03
0700		Calm	10.6	99		-	-	.07
0800	280	0.7	11.7	99		-	-	.16
0900	042	1.6	12.2	99		-	-	.16
1000	308	1.7	12.2	96		1	1	.12
1100	325	0.7	13.3	92		2	3	.19
1200	358	1.5	13.3	89		3	3	.22
1300	316	2.2	13.9	85		3	6	.25
1400	318	2.8	14.4	82		2	3	.35
1500	312	2.3	15.6	77		3	3	.59
1600	291	3.8	15.0	85		3	3	.29
1700	295	4.2	14.4	78		3	3	.18
1800	284	5.5	13.9	72		1	1	.12
1900	295	3.8	13.3	78		1	1	.03
2000	275	2.2	12.8	82		1	1	
2100	266	2.5	11.7	87		1	2	
2200	287	3.0	11.7	86		1	1	
2300	274	2.6	11.1	86		1	1	
2400	269	2.5	11.1	90		1	2	
Day					.05	-	-	166

31 May 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	259	3.1	11.1	90		1	2	
0200	255	2.6	11.1	94		1	2	
0300	247	2.7	10.0	99		2	2	
0400	229	2.3	10.0	99		2	2	
0500	222	3.3	10.0	99		2	3	
0600	225	3.1	10.6	99		3	3	
0700	222	3.5	10.6	99		3	4	.05
0800	232	3.7	11.7	94		4	5	.10
0900	239	5.3	12.8	81		4	4	.20
1000	256	5.8	13.9	74		-	-	.40
1100	264	6.5	14.4	72		3	4	.30
1200	273	7.0	13.9	72		4	7	.19
1300	264	5.5	13.9	72		3	4	.35
1400	264	6.9	15.6	66		4	7	.40
1500	269	6.3	15.6	66		4	7	.35
1600	284	5.3	15.6	70		2	4	.30
1700	309	6.1	16.1	61		1	1	.52
1800	297	5.4	16.1	60		1	1	.28
1900	282	4.8	15.6	63		1	1	.15
2000	274	2.0	13.9	69		1	1	.03
2100	277	0.6	12.2	91		1	1	
2200		Calm	10.6	99		1	1	
2300	078	1.0	8.3	99		1	2	
2400	083	0.6	7.2	99		1	1	
Day						2	7	216

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

1 June 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	020	0.9	6.1	99		1	2	
0200	089	1.3	5.6	99		1	2	
0300	085	1.4	5.0	99		1	2	
0400	090	0.9	4.4	99		1	1	
0500	085	1.4	3.9	99		1	1	.06
0600	077	1.6	4.4	99				
0700	085	1.6	7.8	99		1	2	.24
0800	112	1.5	11.1	99		2	3	.55
0900	203	3.2	14.4	80		3	4	.74
1000	197	3.0	16.7	66		5	8	.93
1100	220	3.0	18.9	58		6	7	1.13
1200	250	2.4	20.6	54		3	4	1.24
1300	250	2.2	21.7	48		1	1	.84
1400	232	3.5	21.1	48		1	1	.74
1500	200	2.5	22.2	45		1	1	.96
1600	244	2.8	22.2	44		1	1	.39
1700	184	1.3	21.7	45		1	1	.11
1800	Var	2.2	20.0	58		0	1	.03
1900	164	2.5	16.7	78	.05	0	1	.02
2000	144	2.4	15.6	96	.08	1	1	
2100	114	2.0	14.4	98	.05	1	1	
2200	148	3.9	15.0	99	.08	1	1	
2300	163	3.6	15.6	96		1	2	
2400	184	2.9	15.6	96	.03	1	1	
Day					.29	1	8	477

29 June 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	179	0.8	12.2	99		2	2	
0200	211	0.9	12.8	99		2	2	
0300	216	2.5	13.3	92		1	2	
0400	206	3.2	13.9	84		1	1	
0500	200	3.6	14.4	84		1	1	.10
0600	194	2.7	15.6	73				
0700	167	2.0	16.1	73		1	1	.18
0800	199	4.2	17.8	64		0	0	.20
0900	206	4.2	18.9	64		0	0	.25
1000	199	6.2	20.6	62		1	1	.65
1100	219	6.8	22.8	54		1	1	1.15
1200	229	7.2	23.9	53		1	1	1.21
1300	229	7.0	25.6	52		-	-	1.31
1400	226	7.4	26.1	51		-	-	.99
1500	239	7.7	26.7	51		-	-	.98
1600	239	7.9	27.2	51		-	-	.74
1700	249	7.0	27.2	52		2	3	.33
1800	247	6.0	26.1	56		2	2	.31
1900	238	4.0	26.1	60		2	2	.13
2000	221	3.8	25.0	66		2	2	.06
2100	215	3.4	22.8	78		2	2	
2200	211	2.7	21.7	89		1	1	
2300	207	2.8	20.6	97		1	1	
2400	222	3.3	20.6	95				
Day						1	3	514

30 June 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	209	2.9	19.4	94		1	1	
0200	217	2.8	18.9	97		1	1	
0300	222	2.8	18.9	98		2	2	
0400	232	2.6	17.8	98		2	3	
0500	215	2.9	18.3	98		3	3	
0600	231	2.4	18.9	96		2	3	.06
0700	222	3.5	21.1	83		2	2	.29
0800	224	3.7	22.8	74		2	3	.53
0900	224	5.4	25.0	64		3	4	.77
1000	251	7.5	26.7	58		4	4	.96
1100	268	7.8	28.3	52		4	5	1.10
1200	270	8.1	28.9	46		3	4	1.23
1300	262	7.6	30.0	41		-	-	1.26
1400	246	8.2	31.1	39		-	-	1.24
1500	259	7.9	31.1	36		-	-	1.14
1600	246	7.4	31.7	35		-	-	.92
1700	255	6.8	31.1	35		2	3	.72
1800	244	6.2	31.1	36		1	1	.47
1900	241	4.7	30.0	40		1	1	.22
2000	226	3.5	28.3	44		2	2	.04
2100	236	1.3	25.6	60		2	2	
2200	224	1.4	22.2	78		1	2	
2300	227	1.3	21.1	90		1	1	
2400	229	2.2	20.0	94		1	1	
Day						2	5	656

1 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	229	2.4	19.4	98		1	1	
0200	224	2.8	18.9	99		1	1	
0300	232	2.4	18.9	99		1	1	
0400	223	2.5	18.9	99		1	1	
0500	234	2.0	19.4	99		1	2	.10
0600	227	1.8	18.9	99				
0700	209	3.5	21.1	96		2	3	.30
0800	221	4.6	23.3	84		3	3	.55
0900	234	5.5	25.6	74		-	-	.79
1000	239	6.4	27.2	66		-	-	1.02
1100	233	6.9	28.9	58		-	-	1.17
1200	236	7.5	29.4	53		-	-	1.30
1300	242	8.0	31.7	44		-	-	1.29
1400	243	6.8	31.7	42		-	-	1.26
1500	240	6.9	32.2	42		-	-	1.16
1600	241	6.8	32.2	41		-	-	.94
1700	231	6.0	31.1	41		-	-	.71
1800	237	6.5	30.0	45		1	2	.39
1900	263	5.4	26.1	51		1	2	.07
2000	247	1.9	23.3	49		1	2	
2100	Var	1.8	21.7	71		3	5	
2200	Var	2.2	21.1	80		1	2	
2300	Var	0.9	20.6	90		2*	3	
2400		Calm	19.4	95		2	2	
Day						-	-	662

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

3 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	309	1.4	18.3	85		1	2	
0200	322	2.1	17.8	86		2	2	
0300	329	1.5	16.1	92		1	2	
0400	326	1.6	15.6	99		1	1	
0500	323	1.8	15.6	96		2	2	
0600	304	2.1	15.6	94		3	4	.12
0700	309	2.0	15.6	94		3	4	.21
0800	320	1.9	16.7	90		2	3	.47
0900	321	2.1	19.4	69		1	1	.82
1000	318	3.3	20.6	58		1	3	1.06
1100	290	3.6	21.1	52		3	6	---
1200	289	4.0	21.7	50		3	6	---
1300	275	5.1	22.2	46		-	-	---
1400	292	5.0	22.8	43		-	-	1.27
1500	284	4.7	23.3	42		-	-	1.00
1600	288	4.2	22.8	44		-	-	.77
1700	319	4.2	21.7	43		1	3	.59
1800	324	4.3	20.6	50		1	1	.43
1900	337	3.9	18.3	57		0	0	.20
2000	329	3.6	16.7	62		0	0	
2100	327	2.3	14.4	76		0	0	
2200	342	1.9	13.9	79		0	0	
2300	314	1.3	11.7	92		0	0	
2400	313	1.3	10.0	99		0	0	
Day						1	6	---

4 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	Var	1.8	8.3	99		0	0	
0200		Calm	7.8	99		0	0	
0300		Calm	6.7	99		0	1	
0400	080	1.3	6.7	99		0	1	
0500	068	0.9	6.1	99		0	1	
0600	074	0.7	6.7	99		0	0	.15
0700	Var	0.8	9.4	99		1	1	.36
0800	305	1.6	12.2	86		1	1	.60
0900	356	2.8	15.0	65		1	1	.88
1000	016	3.1	16.1	55		1	1	1.06
1100	332	2.9	18.3	50		1	1	1.38
1200	Var	3.0	18.9	43		1	1	1.43
1300	Var	2.0	20.6	38		1	1	1.40
1400	Var	2.5	21.1	34		0	0	1.34
1500	319	3.0	21.7	33		0	0	1.26
1600	289	2.4	22.2	32		0	0	1.01
1700	341	2.7	22.2	30		1	1	.78
1800	267	2.5	21.7	30		2	2	.50
1900	278	2.3	20.6	31		2	2	.26
2000	268	1.2	18.3	40		1	1	
2100	073	1.2	13.3	66		1	1	
2200	075	1.0	11.1	72		1	1	
2300	090	1.3	9.4	92		2	3	
2400	074	1.3	8.9	99		1	2	
Day						1	3	745

5 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	083	1.4	8.3	99		1	1	
0200	079	1.3	7.8	99		1	1	
0300	070	1.1	7.2	99		1	1	
0400	Var	1.1	6.7	99		1	1	
0500	076	1.2	6.7	99		1	2	
0600	084	1.0	8.9	99		3	4	.11
0700	154	1.3	13.3	75		3	4	.32
0800	185	2.2	16.7	52		6	10	.56
0900	218	3.6	19.4	42		9	12	.83
1000	214	3.1	21.1	36		5	6	1.03
1100	240	2.5	22.8	31		4	5	1.14
1200	Var	2.4	23.3	30		2	3	1.22
1300	Var	2.7	24.4	30		-	-	1.29
1400	Var	2.9	25.0	29		-	-	1.27
1500	198	2.7	25.6	28		-	-	1.10
1600	Var	2.0	25.0	29		-	-	.55
1700	232	2.6	24.4	30		1	-	.44
1800	239	2.2	24.4	31		1	2	.31
1900	282	1.5	22.2	46		3	4	.11
2000		Calm	20.0	60		3	3	
2100	101	1.5	17.8	72		3	4	
2200		Calm	17.8	71		3	4	
2300	342	2.5	17.2	70		2	3	
2400	355	5.2	15.6	75		0	1	
Day						3	12	616

6 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	048	3.0	14.4	97		0	0	
0200	049	2.9	13.9	99	.13	0	0	
0300	146	1.5	12.8	99		0	0	
0400	Var	1.2	12.2	99		0	0	
0500		Calm	12.2	99	.03	0	0	
0600		Calm	13.3	99		0	0	
0700	341	1.2	14.4	97		0	0	.12
0800	332	1.2	15.6	93		0	0	.32
0900	299	1.4	16.7	91	.38	-	-	---
1000	---	---	18.3	86		-	-	---
1100	---	---	21.1	63		-	-	---
1200	342	2.1	22.2	52		1	2	1.36
1300	342	2.5	22.2	49		0	0	1.04
1400	331	2.8	22.8	44		0	0	1.28
1500	342	3.8	23.3	38		0	0	1.24
1600	335	4.0	23.3	34		0	0	1.00
1700	344	3.3	22.8	34		0	0	.77
1800	344	3.3	22.2	36		0	0	.43
1900	323	1.8	21.1	39		1	1	.20
2000	339	1.1	20.0	44		0	0	.06
2100	024	1.0	15.6	70		0	0	
2200	089	0.7	12.8	91		0	1	
2300	047	0.8	11.7	98		1	2	
2400	077	1.1	10.6	99		0	0	
Day					.54	0	2	---

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

8 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	087	1.0	12.2	99		2	3	
0200	087	1.3	12.2	99		2	3	
0300	085	1.1	11.1	99		2	2	
0400	082	1.1	11.1	99		2	2	
0500	076	1.1	10.6	99		2	2	
0600	063	0.8	11.1	99		3	5	.14
0700	072	0.8	15.6	87		6	7	.32
0800	110	1.5	19.4	70		4	6	.58
0900	191	1.3	22.8	55		3	4	.81
1000	202	2.0	25.0	46		2	3	1.03
1100	210	2.6	26.1	38		1	1	1.14
1200	211	3.4	27.2	35		1	1	1.25
1300	192	3.0	28.9	33		1	1	1.25
1400	214	2.8	29.4	32		0	0	---
1500	212	3.0	30.0	30		1	1	1.19
1600	227	2.7	30.0	30		0	0	1.05
1700	242	2.4	30.0	30		0	1	.88
1800	290	1.7	30.0	31		1	1	.61
1900	325	1.2	27.8	42		1	1	.39
2000	096	1.1	23.3	69		1	1	.09
2100	100	1.7	21.7	72		1	1	
2200	168	4.1	22.2	70		1	2	
2300	196	2.1	22.8	69		1	2	
2400	Var	1.6	21.1	84		0	1	
Day						2	7	---

9 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	226	1.5	19.4	92		1	1	
0200	189	2.2	20.0	85		1	1	
0300	177	1.8	20.0	83		1	1	
0400	156	1.4	19.4	92		0	0	
0500		Calm	17.8	97		0	0	
0600		Calm	17.2	99		0	0	.09
0700	218	1.3	18.9	99		1	1	.20
0800	214	3.8	21.1	76		1	2	.43
0900	215	4.1	23.9	62		1	1	.75
1000	227	4.3	25.0	52		-	-	.93
1100	219	4.4	26.7	47		-	-	1.07
1200	232	3.8	27.8	43		-	-	1.25
1300	232	3.8	28.9	40		-	-	---
1400	223	3.5	28.9	39		-	-	1.21
1500	191	3.8	30.0	36		-	-	1.04
1600	179	4.7	29.4	34		0	0	.72
1700	189	3.3	28.9	34		0	0	.40
1800	179	3.8	28.9	32		1	2	.54
1900	166	4.4	27.2	40		0	0	.22
2000	143	3.1	25.6	44		0	0	
2100	161	2.8	22.8	52		0	0	
2200	200	1.8	21.7	55		0	1	
2300	204	1.7	20.6	62		1	3	
2400	226	1.7	20.0	80		4	4	
Day						0	4	---

10 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	234	0.8	18.9	88		3	5	
0200	212	0.7	18.3	90		3	3	
0300	146	0.7	17.2	94		2	3	
0400		Calm	16.7	98		2	3	
0500	Var	0.5	16.1	99		1	2	
0600	091	0.7	15.6	99		1	1	.09
0700	098	0.7	17.8	90		1	2	.26
0800	202	1.3	20.6	68		4	4	---
0900	226	3.3	23.3	56		5	6	---
1000	256	1.9	24.4	55		6	6	---
1100	268	2.0	27.2	52		5	6	---
1200	274	2.5	27.8	48		3	6	---
1300	287	2.9	27.2	50		4	6	---
1400	305	2.5	27.8	48		1	3	---
1500	336	3.3	28.9	47		0	0	.80
1600	346	3.2	28.9	48		0	0	.52
1700	Var	2.4	26.1	52		1	3	.27
1800	159	3.5	24.4	68		2	3	.27
1900	150	2.7	22.8	74		2	4	.14
2000	Var	1.4	21.7	85		1	1	
2100	083	2.5	21.1	89		0	0	
2200	081	3.6	21.1	92		0	0	
2300	077	3.3	20.0	94		0	0	
2400	080	2.8	19.4	98		0	0	
Day						2	6	---

14 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	120	1.7	18.3	94		1	1	
0200	077	1.1	17.8	97		1	1	
0300	077	1.7	17.2	99		1	1	
0400	095	1.9	16.7	99		1	1	
0500	086	1.1	17.2	99		1	1	
0600	077	0.9	18.9	94		1	1	.05
0700	105	1.1	22.8	77		1	1	.24
0800	182	2.2	23.9	71		2	3	.49
0900	221	3.5	25.6	69		2	3	---
1000	222	3.2	26.1	64		1	1	---
1100	237	2.5	27.2	61		1	1	---
1200	238	2.6	27.8	57		1	1	---
1300	219	3.3	28.9	52		-	-	.99
1400	242	3.5	28.9	52		1	1	1.24
1500	259	3.8	28.9	51		1	1	.97
1600	209	3.2	27.2	51		1	1	.87
1700	141	3.1	26.7	58		1	1	.38
1800	251	2.4	22.2	86	.03	1	1	.10
1900	311	1.5	21.1	99		1	1	
2000	164	1.0	21.1	99	.05	0	1	
2100	Var	0.9	21.1	99		0	0	
2200	103	1.1	21.1	99		0	0	
2300	091	0.9	21.1	99		1	1	
2400	077	0.8	21.1	99		1	2	
Day					.08	1	3	---

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

17 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	232	1.0	18.9	99		2	3	
0200	219	1.8	18.9	99		1	2	
0300	218	0.8	18.9	99		2	2	
0400	192	1.0	18.3	99		2	3	
0500		Calm	17.8	99		3	6	
0600	Var	0.1	17.8	99		3	4	.08
0700	190	0.8	19.4	99		4	6	.23
0800	223	2.0	21.1	94		4	5	.37
0900	231	2.2	23.3	82		7	9	.64
1000	249	1.6	25.0	74		10	12	---
1100	238	1.2	27.2	63		7	12	---
1200	254	2.9	28.3	61		7	9	---
1300	244	2.7	29.4	54		12	17	1.10
1400	243	2.5	30.0	48		4	6	1.19
1500	255	2.5	30.6	48		3	3	1.02
1600	256	3.0	30.6	46		2	3	.85
1700	239	2.5	30.0	48		2	2	.52
1800	254	2.3	29.4	50		2	2	.36
1900	320	2.5	26.7	68		1	2	.11
2000	064	1.0	25.0	82		1	1	
2100	061	0.8	22.8	92		1	1	
2200	092	0.4	21.7	97		1	2	
2300	089	1.1	21.1	99		1	1	
2400	099	0.5	20.0	99		1	2	
Day						3	17	---

19 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100		Calm	20.6	96		1	2	
0200	Var	1.8	21.1	90		2	3	
0300	222	1.4	21.7	87		3	3	
0400	259	0.8	20.6	95		2	3	
0500	242	1.3	20.0	99		2	4	
0600	210	1.9	20.0	99		2	5	.07
0700	231	3.7	21.7	91		3	3	.27
0800	228	5.1	22.2	84		5	6	.25
0900	236	5.2	21.7	90		5	5	.14
1000	247	4.2	21.1	96		5	5	.10
1100	232	3.3	21.1	99	.05	3	3	.18
1200	237	3.2	21.1	99	.10	3	3	.19
1300	232	4.1	22.8	90		3	4	.50
1400	236	4.7	24.4	81		3	3	.58
1500	280	6.0	26.7	62		1	3	.89
1600	302	5.2	27.2	43		1	1	.97
1700	318	4.3	27.2	42		1	2	.72
1800	335	3.9	26.1	43		1	1	.44
1900	337	4.2	24.4	46		0	0	.21
2000	340	3.4	22.2	54		0	0	
2100	339	4.1	20.0	68		0	0	
2200	347	3.7	18.3	76		0	0	
2300	360	0.9	16.1	90		0	0	
2400		Calm	14.4	96		0	0	
Day					.15	2	6	330

21 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100		Calm	11.7	98		1	2	
0200		Calm	11.1	99		0	0	
0300	072	0.8	10.6	99		0	0	
0400	078	0.9	10.0	99		-	-	
0500	064	0.4	9.4	99		-	-	
0600	070	0.9	10.6	99		-	-	.09
0700	090	0.9	15.6	84		-	-	.27
0800	090	1.3	18.9	63		3	5	.55
0900	150	1.4	21.7	52		5	6	.80
1000	221	2.2	23.3	43		3	6	1.02
1100	Var	2.3	25.0	35		1	1	1.16
1200	287	2.2	26.1	33		1	1	1.24
1300	274	2.7	26.7	30		-	-	1.31
1400	266	2.3	27.2	29		-	-	1.30
1500	259	2.7	27.8	24		-	-	1.19
1600	258	2.8	27.8	25		-	-	.99
1700	262	3.1	27.8	27		0	0	.73
1800	249	2.2	27.8	28		0	0	.47
1900	Var	0.9	27.2	33		0	0	.21
2000		Calm	22.2	50		0	0	
2100	079	1.0	18.3	72		0	0	
2200	079	1.2	17.2	81		1	1	
2300	258	0.9	17.2	82		1	1	
2400	Var	0.7	16.1	92		3	4	
Day						-	-	680

22 July 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	095	0.2	15.0	97		4	4	
0200	099	0.4	14.4	96		3	3	
0300	103	0.5	14.4	98		2	2	
0400	088	0.6	15.0	92		2	2	
0500	097	0.5	15.6	89		2	2	
0600	083	0.6	16.1	82		4	6	.07
0700	111	0.6	18.9	74		6	7	.23
0800	216	1.3	22.2	63		4	5	.46
0900	222	3.4	25.0	54		3	4	.70
1000	228	3.8	26.1	54		3	3	.75
1100	227	2.9	26.7	57		2	3	.72
1200	238	4.6	29.4	52		3	5	1.11
1300	240	4.6	30.6	47		4	6	1.05
1400	235	4.6	31.1	43		2	2	.74
1500	Var	3.3	28.3	58		2	3	.27
1600	073	2.5	25.6	74		1	2	.40
1700	051	2.6	24.4	74	.64	1	1	.10
1800	Var	2.4	21.1	82	.64	1	1	.06
1900	190	2.1	20.6	97		1	2	.06
2000	179	1.7	20.6	96		1	2	
2100	Var	1.2	20.0	96		2	3	
2200	Var	1.1	18.9	99		3	4	
2300	206	1.4	18.3	99		3	5	
2400	231	0.9	18.3	99		1	1	
Day					1.28	2	7	403

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

15 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min	
0100	151	4.2	15.0	99		0	0		
0200	155	3.5	15.0	99		0	0		
0300	167	3.0	15.0	99		0	0		
0400	163	2.8	15.0	99		0	0		
0500	166	1.9	13.9	99		3	4		
0600	163	1.0	13.3	99		5	6		
0700	154	0.4	12.2	99		3	4	.03	
0800		Calm	14.4	99		2	2	.18	
0900	149	1.0	17.2	82		2	4	.41	
1000	181	2.2	20.0	61		1	2	.63	
1100	208	3.4	22.2	50		0	0	.81	
1200	199	2.4	22.8	45		0	0	.87	
1300	221	2.6	23.9	43		0	0	.87	
1400	Var	1.8	24.4	43		0	0	.82	
1500	155	2.1	24.4	42		1	2	.65	
1600	170	2.4	23.9	41		1	1	.42	
1700	167	2.1	22.8	43		0	1	.21	
1800	136	2.4	20.6	50		0	0	.04	
1900	137	2.7	18.2	63		0	0		
2000	121	2.0	16.7	76		0	0		
2100	159	3.4	17.2	84		0	1		
2200	163	3.4	16.7	87		2	4		
2300	162	3.0	16.1	90		3	5		
2400	165	2.3	15.6	95		3	4		
Day						1	6	355	

16 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min	
0100	165	2.8	15.0	97		3	5		
0200	194	0.6	13.3	99		3	3		
0300		Calm	12.8	99		2	2		
0400	158	1.7	13.3	97		2	3		
0500	166	1.6	13.3	97		1	2		
0600	197	1.0	12.8	99		2	2		
0700	130	1.4	13.9	91		2	4	.03	
0800	148	2.7	16.7	80		5	8	.20	
0900	162	2.6	18.9	70		4	5	.43	
1000	162	3.2	20.6	65		1	3	.64	
1100	170	4.8	21.7	58		0	0	.80	
1200	154	4.3	22.2	55		0	1	.87	
1300	148	4.5	22.8	52		0	1	.87	
1400	158	5.2	23.3	49		0	0	.79	
1500	150	4.9	22.8	50		-	-	.63	
1600	155	5.0	22.8	51		-	-	.43	
1700	149	4.4	21.1	56		-	-	.15	
1800	147	3.2	20.0	64		-	-		
1900	147	3.4	18.3	74		-	-		
2000	155	1.8	17.8	81		-	-		
2100	164	2.8	17.2	87		-	-		
2200	155	2.5	17.2	92		-	-		
2300	175	2.9	17.2	92		-	-		
2400	167	2.9	17.2	92		-	-	349	
Day									

17 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min	
0100	172	2.8	17.2	94		-	-		
0200	168	2.3	17.2	96		-	-		
0300	166	1.9	17.2	97		-	-		
0400	136	1.4	16.7	99		-	-		
0500	124	1.8	16.7	98		-	-		
0600	135	2.7	17.2	92		-	-		
0700	135	2.6	17.8	88		1	-		
0800	141	3.1	18.3	83		2	2	.15	
0900	147	4.4	20.0	75		3	3	.40	
1000	147	3.8	21.1	68		1	2	.70	
1100	156	4.0	22.2	60		2	3	.78	
1200	157	3.8	23.3	52		1	2	.85	
1300	164	4.2	24.4	48		1	1	.86	
1400	167	4.6	25.0	45		-	-	.80	
1500	164	4.8	24.4	45		-	-	.66	
1600	154	4.8	23.9	47		-	-	.41	
1700	150	4.3	22.2	48		-	-	.18	
1800	139	3.3	20.6	54		0	0		
1900	126	3.8	19.4	64		0	0		
2000	143	4.5	18.9	68		0	1		
2100	155	5.4	18.3	69		0	0		
2200	168	3.8	17.8	71		0	1		
2300	176	3.8	17.8	75		1	2		
2400	170	4.4	17.8	80		0	0		
Day						-	-	347	

18 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min	
0100	156	4.2	17.8	85		1	1		
0200	170	3.8	17.8	87		1	1		
0300	165	2.9	17.8	88		1	2		
0400	174	3.5	17.8	89		1	2		
0500	172	3.7	17.8	90		1	2		
0600	168	3.7	17.8	89		0	1		
0700	155	3.3	17.8	86		1	1	.11	
0800	147	3.5	18.3	84		1	1	.21	
0900	153	4.3	19.4	80		1	1	.27	
1000	164	4.6	19.4	79		0	0	.27	
1100	168	3.4	20.0	79		0	1	.20	
1200	168	4.2	19.4	86		0	0	.24	
1300	141	2.5	18.9	99	.05	0	0	.24	
1400	126	2.7	18.3	99		0	0	.16	
1500	149	2.5	18.3	96	.03	0	0	.17	
1600	149	3.1	18.9	91		0	0	.09	
1700	141	4.3	19.4	89		0	0	.07	
1800	140	6.3	18.9	92		0	0		
1900	140	5.2	18.3	89	.03	0	0		
2000	171	4.4	18.9	83		0	0		
2100	184	4.0	19.4	82		0	0		
2200	170	4.9	18.9	90		0	0		
2300	155	4.0	18.3	99	.08	0	0		
2400	156	2.1	17.8	99	.36	0	0		
Day					.55	0	2	105	

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

20 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100		Calm	3.3	99		1	1	
0200		Calm	2.8	99		1	1	
0300		Calm	2.8	99		2	2	
0400		Calm	2.8	99		2	2	
0500	208	0.9	2.2	99		2	3	
0600	207	0.9	2.2	99		3	3	
0700	195	0.4	3.9	99		2	2	
0800	212	1.4	6.7	86		2	2	.17
0900	222	2.7	10.0	70		3	4	.41
1000	223	2.5	11.7	63		5	6	.62
1100	239	3.0	13.3	55		9	15	.75
1200	259	3.7	15.0	47		12	15	.85
1300	270	5.1	16.1	41		8	11	.87
1400	274	5.6	16.1	41		5	-	.71
1500	289	5.9	16.1	38		-	-	.60
1600	286	5.5	15.6	40		-	-	.42
1700	284	4.6	14.4	42		1	1	.18
1800	282	4.4	12.8	45		2	2	
1900	282	4.1	11.1	49		2	2	
2000	291	3.5	11.1	52		2	2	
2100	309	3.2	10.6	56		5	7	
2200	281	3.2	9.4	65		1	5	
2300	275	3.4	8.3	75		1	1	
2400	275	3.0	7.2	85		1	1	
Day						3	15	334

21 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	281	3.3	7.8	89		2	2	
0200	278	3.5	6.7	92		1	2	
0300	272	3.0	6.1	98		1	1	
0400	270	1.8	6.1	99		1	1	
0500	267	2.3	5.6	99		0	1	
0600	264	2.1	5.6	99		1	1	
0700	268	2.0	6.1	99		1	2	
0800	284	2.4	6.7	99		1	1	.10
0900	288	2.7	9.4	85		2	2	.43
1000	284	3.8	10.6	75		1	1	.48
1100	297	4.0	10.6	70		1	1	.23
1200	289	4.2	11.7	66		1	1	.26
1300	273	3.7	11.7	58		1	1	.49
1400	292	3.8	13.3	53		3	-	.92
1500	281	4.4	13.9	49		-	-	.62
1600	289	4.5	13.9	48		-	-	.43
1700	282	3.5	13.3	51		-	-	.18
1800	259	1.5	11.1	59		2	2	
1900		Calm	7.8	83		3	3	
2000		Calm	6.1	97		3	4	
2100	212	0.5	5.0	99		3	3	
2200	Var	0.5	4.4	99		4	4	
2300	093	0.4	3.9	99		6	8	
2400	093	0.7	3.3	99		5	8	
Day						2	8	247

22 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	099	1.1	2.8	99		4	6	
0200	091	0.9	2.2	99		3	5	
0300	079	1.0	2.2	99		5	5	
0400	090	1.4	1.7	99		3	5	
0500	089	1.1	2.2	99		3	5	
0600	086	1.3	2.2	99		5	6	
0700	087	1.1	1.7	99		6	8	
0800	083	0.7	4.4	99		4	5	.20
0900	095	0.8	8.9	80		3	3	.43
1000	114	1.7	13.3	50		2	3	.65
1100	180	4.1	16.1	35		3	3	.76
1200	205	5.3	17.2	33		1	1	.74
1300	211	5.2	19.4	31		1	1	.90
1400	210	7.2	20.6	29		-	-	.73
1500	215	6.8	20.0	28		-	-	.41
1600	211	5.8	19.4	28		-	-	.23
1700	207	4.2	18.3	31		-	-	.08
1800	214	2.3	17.2	33		1	1	
1900	191	2.6	16.1	35		2	2	
2000	165	1.4	16.1	35		2	3	
2100	184	2.3	15.6	40		2	3	
2200	238	3.2	16.1	42		1	1	
2300	284	5.2	14.4	63		2	4	
2400	216	2.5	12.2	96		1	2	
Day						2	8	307

23 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	227	2.1	11.1	99		1	2	
0200	264	3.9	11.7	92		2	2	
0300	277	5.9	10.6	84		3	5	
0400	259	6.8	8.9	72		1	2	
0500	258	6.8	6.7	68		1	1	
0600	244	3.7	5.6	74		2	3	
0700	244	3.3	5.6	82		2	2	
0800	234	3.6	6.1	84		3	3	.16
0900	232	4.6	7.8	75		5	5	.39
1000	248	4.8	9.4	67		4	4	.64
1100	244	5.8	11.1	55		3	4	.80
1200	247	6.6	11.7	44		2	3	.93
1300	254	5.6	12.8	41		2	2	.87
1400	257	5.5	12.8	39		-	-	.75
1500	252	4.2	13.3	38		-	-	.59
1600	251	3.3	12.8	38		-	-	.38
1700	267	3.3	11.1	41		2	2	.12
1800	Var	0.7	8.9	52		3	4	
1900	086	0.8	6.1	68		3	3	
2000	077	0.8	5.0	82		3	3	
2100	081	1.1	3.9	94		2	3	
2200	082	1.4	2.8	98		2	3	
2300	072	1.3	1.7	99		3	4	
2400	077	1.1	1.7	99		2	3	
Day						2	5	337

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

24 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	080	1.2	2.8	99		2	2	
0200	077	1.2	2.2	99		2	2	
0300	072	1.0	2.8	99		2	2	
0400	076	1.2	3.9	97		2	3	
0500	082	1.4	4.4	92		3	3	
0600	078	1.1	5.0	87		3	3	
0700	079	0.9	6.1	80		3	3	
0800	106	1.2	7.2	73		3	3	.04
0900	102	1.1	9.4	56		-	-	.21
1000	126	2.3	10.6	51		0	0	.24
1100	120	3.0	11.1	51		0	0	.28
1200	114	1.3	10.6	53		-	-	.19
1300	105	2.5	10.6	46		-	-	.16
1400	086	2.8	9.4	56		0	0	.25
1500	082	2.0	9.4	68		0	0	.13
1600	063	1.9	8.3	85		0	0	.07
1700	071	2.5	7.2	99		0	0	.05
1800	064	2.3	6.7	99	.05	0	0	
1900	066	1.0	6.7	99		0	0	
2000	061	0.8	6.7	99		0	0	
2100	014	0.7	6.7	99		0	0	
2200	279	0.4	6.7	99		0	0	
2300	305	0.5	6.1	99		0	1	
2400	044	0.7	6.1	99		1	1	
Day					.05	1	3	97

25 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	059	0.8	6.1	99		1	1	
0200		Calm	6.1	99		1	1	
0300	207	1.3	6.1	99		1	1	
0400	239	2.2	6.1	99		1	1	
0500	242	2.6	5.6	99		1	2	
0600	237	1.7	5.0	99		3	3	
0700	249	1.7	5.6	99		4	6	
0800	259	3.5	5.6	97		8	9	.04
0900	254	3.9	6.1	91		9	10	.11
1000	247	4.6	6.7	83		8	9	.19
1100	262	5.1	7.8	74		6	9	.31
1200	264	5.1	7.8	69		2	3	.23
1300	247	6.4	8.3	66		3	4	.43
1400	246	5.5	8.3	66		2	3	.19
1500	264	5.8	7.2	70		3	3	.06
1600	272	5.1	6.7	78		2	2	.02
1700	273	3.5	5.6	98		2	2	
1800	247	3.5	5.0	99		3	5	
1900	244	4.4	5.0	99	.03	5	6	
2000	257	4.6	5.6	99		5	5	
2100	254	4.9	5.6	99		3	3	
2200	267	6.5	5.0	99	.03	3	3	
2300	273	7.3	5.0	99		3	5	
2400	287	6.4	4.4	97		1	1	
Day					.06	3	10	94

26 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	287	6.3	4.4	91		1	1	
0200	284	6.1	3.9	91		1	1	
0300	270	5.4	3.3	88		1	1	
0400	270	4.5	3.3	83		1	1	
0500	240	3.3	2.2	90		2	2	
0600	240	3.1	1.7	99		3	4	
0700	249	4.3	2.2	94		4	5	
0800	263	5.3	2.8	83		5	5	.05
0900	265	5.9	3.3	75		5	7	.19
1000	277	6.6	4.4	65		3	5	.48
1100	269	7.6	3.9	65		4	6	.26
1200	271	6.9	3.9	83		5	8	.30
1300	284	7.0	3.0	93		-	-	.22
1400	273	6.0	4.4	80		-	-	.27
1500	262	6.7	6.1	67		-	-	.53
1600	258	7.4	5.0	71		1	1	.22
1700	264	5.1	4.4	83		1	2	.04
1800	264	6.4	5.0	78		2	3	
1900	273	8.7	4.4	77		2	2	
2000	274	6.5	4.4	81		2	2	
2100	262	4.9	4.4	85		0	0	
2200	243	4.1	4.4	85		0	0	
2300	246	3.8	4.4	78		0	0	
2400	242	3.5	4.4	74		0	0	
Day						2	8	153

29 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	245	5.8	2.8	99	.08	2	3	
0200	254	6.2	3.3	99	.03	3	3	
0300	250	5.9	3.3	99	.03	3	3	
0400	262	5.6	3.3	99	.13	2	2	
0500	267	6.0	3.3	99		2	2	
0600	266	6.2	3.3	99		1	2	
0700	269	8.0	3.3	97		1	1	
0800	268	6.6	2.8	97		1	2	
0900	266	7.2	2.8	96		2	3	.05
1000	263	7.6	2.2	96		1	2	.05
1100	270	7.1	2.8	94		3	5	.13
1200	284	6.4	3.3	86		3	5	.20
1300	278	6.2	4.4	68		1	1	.20
1400	295	5.4	5.0	56		0	0	.21
1500	272	6.0	4.4	64		-	-	.20
1600	294	6.5	2.8	80		-	-	.15
1700	286	6.1	2.2	93		-	-	.11
1800	284	5.4	1.1	99		1	-	
1900	275	3.4	0.6	99		1	1	
2000	288	2.8	0.6	99		1	1	
2100	266	2.1	0.6	99		2	3	
2200	276	4.0	1.1	97		3	4	
2300	279	3.5	1.1	97		2	2	
2400	274	2.6	1.1	99		2	3	
Day					.27	2	5	77

Table 2 (continued). SURFACE WEATHER AND SO_2 OBSERVATIONS - JIMMY STEWART AIRPORT

30 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	258	2.2	1.1	99	.08	3	4	
0200	257	2.2	1.1	99		4	5	
0300	272	2.4	1.1	99		3	3	
0400	272	2.8	0.6	99		3	3	
0500	256	1.0	0.0	99		3	4	
0600	252	1.7	0.0	99		3	4	
0700	244	1.1	0.6	99		3	3	
0800	263	2.9	1.7	99		3	4	.07
0900	272	3.5	2.8	92		3	3	.20
1000	279	4.0	2.8	86		3	3	.20
1100	293	3.2	3.9	82		2	3	.20
1200	293	3.5	5.0	67		2	3	.39
1300	315	3.4	5.0	73		2	3	.21
1400	331	2.7	5.0	76		1	1	.41
1500	326	3.0	5.0	80		1	1	.46
1600	307	3.1	5.0	72	.05	1	2	.21
1700	289	2.3	4.4	73		3	4	.12
1800	294	1.6	3.3	70		1	2	
1900	337	0.4	0.6	86		2	3	
2000	342	0.3	- 0.5	98		1	1	
2100	341	0.7	- 1.6	99		1	2	
2200	095	0.8	- 2.7	99		1	1	
2300	103	0.3	- 3.2	99		1	3	
2400		Calm	- 3.8	99		2	2	
Day					.13	2	5	147

31 October 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	085	0.5	- 3.8	99		1	2	
0200	087	0.8	- 4.3	99		1	1	
0300	081	0.7	- 4.3	99		1	1	
0400	080	0.3	- 4.9	99		2	2	
0500		Calm	- 5.5	99		2	2	
0600	088	0.5	- 5.5	99		2	2	
0700	086	0.5	- 4.9	99		3	4	
0800	076	0.4	- 2.7	99		5	8	.19
0900	086	0.6	1.7	87		3	4	.39
1000	150	1.3	6.1	58		4	5	.60
1100	176	1.4	7.8	46		4	5	.74
1200	224	1.8	8.9	42		7	8	.81
1300	243	2.1	10.0	37		5	9	.82
1400	239	1.6	10.6	35		2	3	.74
1500	241	1.9	11.1	33		2	2	.60
1600	238	1.4	11.7	31		2	-	.39
1700	257	0.4	10.0	34		-	-	.15
1800		Calm	6.1	46		-	-	
1900	094	0.4	2.8	67		6	7	
2000	089	1.3	1.7	79		4	5	
2100	086	1.1	0.6	81		3	3	
2200	079	0.9	0.0	96		3	4	
2300	080	1.1	- 0.5	99		3	4	
2400	076	1.1	- 0.5	99		3	4	
Day						3	9	326

1 November 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	075	1.2	- 0.5	99		3	3	
0200	079	1.3	- 0.5	99		3	3	
0300	083	1.3	0.0	99		3	4	
0400	074	0.8	1.1	96		4	5	
0500	079	1.0	2.8	91		3	5	
0600	083	0.6	3.9	92		3	3	
0700	147	0.4	6.1	83		3	3	
0800	216	1.7	8.3	83		4	5	.08
0900	215	3.4	11.7	76		5	5	.25
1000	217	3.6	13.9	70		5	5	.52
1100	209	3.7	16.7	66		3	4	.61
1200	225	5.1	18.9	64		3	3	.68
1300	234	5.0	20.6	58		4	5	.70
1400	229	6.2	21.7	57		3	5	.67
1500	229	6.6	21.1	59		1	1	.48
1600	239	4.6	20.6	61		1	-	.30
1700	237	4.2	19.4	65		-	-	.06
1800	240	3.4	18.3	69		-	-	
1900	231	2.9	17.2	75		-	-	
2000	228	2.9	16.1	84		3	5	
2100	219	2.9	15.0	90		1	2	
2200	217	2.3	15.0	90		1	1	
2300	220	2.7	15.0	88		1	1	
2400	234	2.7	15.0	95		1	1	
Day						3	5	261

2 November 1968

Time EST	Dir (°)	Speed (mps)	Temp (°C)	RH (%)	P (cm)	SO_2(pphm) Avg	Peak	Ly/ min
0100	226	4.6	14.4	99		1	2	
0200	227	5.5	12.8	99	.18	2	2	
0300	224	3.6	12.8	99		1	1	
0400	224	3.9	12.2	99		1	1	
0500	227	3.0	12.2	99		1	2	
0600	227	3.3	12.2	99		2	2	
0700	235	3.4	12.2	99		3	3	
0800	236	3.0	12.8	99		3	3	.04
0900	244	3.7	13.3	82		3	3	.25
1000	260	5.0	15.0	65		4	9	.42
1100	266	6.3	16.1	54		2	3	.67
1200	258	6.6	16.1	51		2	3	.66
1300	254	5.9	16.7	48		2	3	.67
1400	249	6.6	17.2	43		3	3	.69
1500	263	6.5	17.2	34		1	2	.56
1600	271	6.9	16.7	30		1	1	.36
1700	268	5.2	15.6	29		1	1	.14
1800	269	3.2	13.3	32		1	1	
1900	255	1.5	10.0	42		1	1	
2000	278	1.2	7.8	54		1	2	
2100	Var	0.3	6.1	68		1	1	
2200	075	0.7	5.6	71		2	2	
2300	087	0.8	5.6	83		2	2	
2400	083	0.7	6.1	89		2	2	
Day					.18	2	9	267

PLUME CROSS SECTIONS

Cross sections of the Keystone plume obtained by the LAPPES helicopter are presented in Table 3. The orientation is such that the reader is looking downwind with the plume top to his right. The height of each traverse above stack base elevation is indicated over the particular column of data with increasing altitude from left to right. The relative order in which the traverses were flown is shown at the base of each column.

The plume can be physically located by means of radial directions listed in the second column for each data point. These were determined by computing clockwise and/or counterclockwise from the given reference point in increments based on the arc distance of the particular cross section. Because of missing coordinates, the reference points for cross sections #38, 108, 109, and 114 were arbitrarily set at 360° and are not referenced to the Keystone stacks; actual plume location may be derived from related measurements.

The first column of each cross section lists the cumulative distance across the plume beginning with zero at the left edge looking downwind. The corresponding SO_2 concentrations in pphm are instantaneous readings taken at 6-second intervals; this corresponds to a crosswind distance increment of 107.3 meters for the March and May series (40 mph) and 134.1 meters during the July and October series (50 mph). The peak concentration in each traverse is shown at the bottom with the data point nearest the peak's location indicated by an asterisk in the column above. All instantaneous and peak SO_2 concentrations are net values, i.e., the ambient SO_2 and CO_2 backgrounds have been subtracted.

When this manner of presentation is used, the horizontal distance across the plume is scaled correctly whereas the vertical is not. To achieve a true physical reproduction of the plume, the distance between the columns would have to be scaled according to the respective traverse heights. Although completely zero traverses are shown as terminating at the plume edge, these flights were normally extended well beyond to confirm the absence of SO_2. Finally, crosswind and vertical integrated concentrations are listed at the bottom and side of each cross section.

Crosswind integrated concentrations (CIC) for each plume traverse were calculated as follows:

$$CIC_j = 2.67 \times 10^{-5} \times \sum_i X_{ij}\, dy_i$$

where 2.67×10^{-5} = conversion factor from pphm to grams/m^3 based on a mean temperature aloft of 4°C and a mean altitude of 425 meters MSL.

X_{ij} = SO_2 concentration in pphm of the i-th data point in the j-th traverse.

dy_i = cross-plume interval at which readings were made (107.3 meters for the March and May series; 134.1 meters during the July and October series).

Vertical integrated concentrations (VIC) for each data point were obtained from the properly aligned traverses by means of this equation:

$$VIC_i = 2.67 \times 10^{-5} \times \sum_j X_{ij}\, dz_j$$

where 2.67×10^{-5} = conversion factor defined above.

X_{ij} = SO_2 concentration in pphm of the i-th data point in the j-th traverse.

dz_j = one-half the difference between the next higher and the next lower pass for interior traverses. For the highest (lowest) traverse, dz_j is the height difference between that traverse and the next lower (higher).

Table 3. PLUME CROSS SECTIONS

Symbols

Ref Pt	:	Direction from Keystone stacks in whole degrees of azimuth of cross section reference point.
Cum y	:	Cumulative distance across plume to nearest whole meter.
Dir (°)	:	Direction from Keystone stacks to nearest tenth degree of each data point.
VIC	:	Vertical integrated concentration to nearest gram per square meter $\times 10^{-3}$.
CIC	:	Crosswind integrated concentration to nearest gram per square meter $\times 10^{-3}$.
Peak	:	Peak SO_2 concentration per traverse in whole parts per hundred million.
Pass	:	Numerical order in which traverses were flown.
*	:	Designation of data point nearest peak concentration location in each traverse.
-	:	Missing data.

Table 3. PLUME CROSS SECTIONS

Keystone #34
14 March 1968
0707-0716 EST

Arc 4.0 km
Ref Pt 097°
SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 295	367	425	484	540	VIC
0	083.1		0				
107	084.7		1				0
215	086.2		2				2
322	087.7		9				4
429	089.3		15				16
536	090.8	0	20				26
644	092.3	1	21				34
751	093.9	*5	*24			0	39
858	095.4	1	19		0	0	51
966	096.9	0	19	0	1	0	36
1073	098.5		9	1	4	0	39
1180	100.0		12	7	4	0	32
1287	101.6		1	16	20	0	75
1395	103.1		0	34	*28	0	97
1502	104.6			38	8	0	72
1609	106.2			26	2	0	43
1717	107.7			44	0		69
1824	109.2			44			69
1931	110.8			28			44
2039	112.3			47			73
2146	113.9			*82			129
2253	115.4			15			24
2360	116.9			1			2
				0			0
CIC		20	436	1098	189	0	
Peak		7	28	87	31	0	
Pass		5	4	3	2	1	

Keystone #35
14 March 1968
0945-1024 EST

Arc 4.0 km
Ref Pt 097°
SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 438	490	566	618	678	740	792	858	922	980	1038	VIC
0	050.8			0									
107	052.4			2									0
215	053.9			1									3
322	055.5			3		0							2
429	057.0			3		3							9
536	058.5			4		0							5
644	060.1			4		2							9
751	061.6			3		1							8
858	063.1			4		3							10
966	064.7			4		4							13
1073	066.2			3		4							15
1180	067.8			4		5							41
1287	069.3			5		10							43
1395	070.8			12		10							55
1502	072.4			13		8							71
1609	073.9			16		6							95
1717	075.4			21		9							70
1824	077.0			19		7							69
1931	078.5			16		5							87
2039	080.0			14		5							99
2146	081.6			16		7							144
2253	083.1			10		13							181
2360	084.7	0		8		*38							228
2468	086.2	1		12		40							218
2575	087.7	8		28		28							267
2682	089.3	*13		*32		17							205
2790	090.8	9		6		6							159
2897	092.3	8		3		4							180
3004	093.9	4		4		5							192
3111	095.4	7		6		3							177
3219	096.9	2		5		2							146
3326	098.5	0		5		2							101
3433	100.0			1		1							78
3541	101.6			0		0							56
3648	103.1												40
3755	104.6												32
3862	106.2												23
3970	107.7												17
4077	109.2												10
4184	110.8												10
4292	112.3												8
4399	113.9												6
4506	115.4												5
													0
CIC		161	488	872	803	696	732	553	509	753	103	0	
Peak		16	24	32	46	49	39	55	39	62	21	0	
Pass		1	2	3	4	5	6	7	8	9	10	11	

Keystone #36
15 March 1968
0705-0721 EST

Arc 4.0 km
Ref Pt 015°
SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 297	352	418	492	514	542	595	VIC
0	010.3	0	0						
107	011.9	2	4						0
215	013.4	4	4	0					9
322	014.9	2	13	1					11
429	016.5	1	36	2					26
536	018.0	*8	*53	7					64
644	019.6	8	59	21	0				111
751	021.1	2	2	*143	1	0	0		146
858	022.6	1	2	121	*32	1	1	0	277
966	024.2	0	0	87	9	1	15	0	276
1073	025.7			5	2	8	*55	0	191
1180	027.2			1	0	32	5	0	77
1287	028.8			5		*97	2	0	29
1396	030.3					1	0	0	67
1502	031.9					0		0	1
								0	0
CIC		82	493	1113	129	404	225	0	
Peak		14	96	154	74	111	123	0	
Pass		4	3	1	2	5	6	7	

Keystone #37
15 March 1968
0725-0741 EST

Arc 10.0 km
Ref Pt 034°
SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 294	358	440	492	530	612	VIC
0	017.4	0						
107	018.0	3						0
215	018.6	3						5
322	019.2	3						5
429	019.8	4						6
536	020.4	4	0					7
644	021.0	4	2					7
751	021.7	5	2					9
858	022.3	6	6	0				11
966	022.9	9	10	1				24
1073	023.5	8	7	6				45
1180	024.1	*11	7	13				50
1287	024.7	5	14	15				59
1395	025.3	2	17	41	0			110
1502	026.0	2	13	*28	1	0		88
1609	026.6	2	16	48	4	3		124
1717	027.2	2	17	36	5	3		110
1824	027.8	2	7	37	2	23		143
1931	028.4	2	*23	42	2	*43		163
2039	029.0	1	3	19	12	30		146
2146	029.6	2	1	1	30	34		99
2253	030.3	2	0	0	*45	14		81
2360	030.9	2			32	0		41
2468	031.5	2			37			47
2575	032.1	1			9			13
2682	032.7	1			1			3
2790	033.3	1			2			4
2897	033.9	1			0		0	1
3004	034.6	0					*3	7
							0	0
CIC		254	407	823	516	429	7	
Peak		12	24	51	46	46	12	
Pass		6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #38
15 March 1968
0750-0811 EST

Arc 16.0 km
Ref Pt 360° (arbitrary)
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 290	362	420	487	534	600	640	VIC
0	351.5			0					0
107	351.9			1					1
215	352.3			2					2
322	352.7			4					6
429	353.0			3					5
536	353.4			3					5
644	353.8		0	4					6
751	354.2		2	5					12
858	354.6		2	8	0				17
966	355.0	0	2	7	1				16
1073	355.3	1	2	11	2				27
1180	355.7	1	4	9	5				32
1287	356.1	1	4	8	7				34
1395	356.5	2	6	13	4				40
1502	356.9	*2	5	*14	10				50
1609	357.3	0	*6	12	14	0			52
1717	357.6	1	3	10	10	2			41
1824	358.0	1	2	10	15	3			49
1931	358.4	1	4	4	*25	4			61
2039	358.8	1	6	6	13	15			64
2146	359.2	0	3	5	16	14			59
2253	359.6	1	3	2	7	*15			43
2360	359.9	0	0	1	2	13			23
2468	000.3			0	2	15			26
2575	000.7			0	0	15			22
2682	001.1				0	12			17
2790	001.5					4	0		6
2897	001.9					2	1		4
3004	002.3					0	2		3
3111	002.6					0	4	0	6
3219	003.0						6	*0	9
3326	003.4						*9	1	14
3433	003.8						7	0	10
3541	004.2						5		7
3648	004.6						8		12
3755	004.9						8		12
3862	005.3						9		13
3970	005.7						6		8
4077	006.1						2		3
4184	006.5						1		1
4292	006.9						0		0
CIC		28	158	397	379	324	197	3	
Peak		3	7	14	26	17	11	3	
Pass		7	6	5	1	2	3	4	

Keystone #40
16 March 1968
0701-0716 EST

Arc 4.0 km
Ref Pt 041°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 182	240	312	370	440	482	553	VIC
0	016.4	0							0
107	017.9	0			0				0
215	019.4	1	0		3		0		6
322	021.0	2	2	0	4		1		12
429	022.5	*1	4	0	17		1		39
536	024.0	1	*9	2	51		*7		118
644	025.6	1	8	30	*58		0	0	167
751	027.1	0	1	38	1			1	70
858	028.7		1	*60	1			1	106
966	030.2		0	15	0	0		1	27
1073	031.7			4		5		1	14
1180	033.3			2		*1		1	5
1287	034.8			0		3		1	6
1395	036.3					2		*1	5
1502	037.9					0		1	1
1609	039.4					0		0	0
CIC		14	68	430	385	30	23	14	
Peak		2	11	70	59	13	28	2	
Pass		7	6	5	4	1	2	3	

Keystone #39
15 March 1968
1007-1033 EST

Arc 4.0 km
Ref Pt 040°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 202	270	340	397	477	508	570	630	704	737	796	850	VIC
0	018.4	0												0
107	020.0	1				0								1
215	021.5	1	0	0	0	1		0						2
322	023.0	1	1	0	1	1		1						6
429	024.6	1	1	1	3	2		8		0				26
536	026.1	2	2	*5	1	3	0	8		1				34
644	027.7	*2	4	3	1	7	0	21		13			0	83
751	029.2	1	10	0	2	18	4	*47	0	12			0	149
858	030.7	0	*11	1	5	32	6	27	0	15			*2	156
966	032.3	1	2	1	5	*27	7	47	5	1			1	151
1073	033.8	0	1	1	9	13	4	50	8	23			1	174
1180	035.3	1	3	0	*15	6	*9	16	1	22		0	0	113
1287	036.9	0	1		6	2	5	16	2	*18	0	0		75
1395	038.4		1		4	1	2	16	6	6	16	1		76
1502	039.9		0		3	0	1	1	34	2	28	*12		120
1609	041.5				1		0	1	31	0	*29	0		93
1717	043.0				0			0	*23		29	1		79
1824	044.6								2		7	0		13
1931	046.1								1		1			1
2039	047.6								0		0			0
CIC		25	104	32	154	318	108	737	318	323	315	38	9	
Peak		4	13	9	16	36	26	55	41	34	34	12	3	
Pass		12	11	10	9	8	1	2	3	4	5	6	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #41
16 March 1968
0721-0734 EST

Arc 10.0 km
Ref Pt 021°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 178	235	313	367	440	475	542	VIC
0	014.2	0		0					
107	014.8	0		2					0
215	015.4	0		3					3
322	016.0	0	0	5					4
429	016.6	0	1	10					9
536	017.3	0	2	16					19
644	017.9	0	1	22	0				30
751	018.5	0	*6	*29	2		0		40
858	019.1	0	3	16	7		1		59
966	019.7	0	1	7	7		2		38
1073	020.3	0	0	1	12		10		27
1180	020.9	0	0	0	24		*16		36
1287	021.6	0	0	0	42		6		65
1395	022.2				*54		0		78
1502	022.8				39	0			91
1609	023.4				19	1			66
1717	024.0				8	4			33
1824	024.6				3	6		0	19
1931	025.3				0	*26		0	14
2039	025.9					17		3	37
2146	026.5					2		*3	30
2253	027.1					1		1	9
2360	027.7					0		0	2
CIC		0	36	303	605	160	101	21	0
Peak		0	9	29	58	28	24	6	
Pass		7	6	5	1	2	3	4	

Keystone #42
16 March 1968
0748-0809 EST

Arc 16.0 km
Ref Pt 018°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 240	310	367	422	483	535	VIC
0	011.0				0			0
107	011.4		0		1			1
215	011.8	0	0		1			2
322	012.2	0	0		3			4
429	012.6	0	1	0	2			4
536	013.0	0	2	2	2			8
644	013.3	0	1	2	3			10
751	013.7	0	1	3	6			16
858	014.1	0	2	3	5			16
966	014.5	0	3	4	6			18
1073	014.9	0	3	5	8			25
1180	015.3	0	3	6	11			31
1287	015.6	0	4	8	11			35
1395	016.0	0	4	8	6			28
1502	016.4	0	5	8	9			34
1609	016.8	0	5	7	9			33
1717	017.2	0	4	8	9			34
1824	017.6	0	6	9	7			34
1931	017.9	0	*8	7	11			35
2039	018.3		6	5	*14			41
2146	018.7		2	8	12			39
2253	019.1		1	9	12	0		34
2360	019.5		1	*9	10	1		33
2468	019.9		0	4	5	3		17
2575	020.3			4	6	5		23
2682	020.6			0	8	4		19
2790	021.0				8	3		17
2897	021.4				3	1		6
3004	021.8				3	2		8
3111	022.2				1	1		3
3219	022.6				1	3	0	6
3326	022.9				1	4	1	7
3433	023.3				0	10	1	17
3541	023.7					7	3	15
3648	024.1					*12	*5	25
3755	024.5					11	1	18
3862	024.9					9	2	15
3970	025.2					3	2	7
4077	025.6					9	2	15
4184	026.0					4	0	6
4292	026.4					1	2	3
4399	026.8					0	1	1
4506	027.2						0	0
4613	027.6						0	0
4721	027.9						0	0
4828	028.3						3	4
4935	028.7						0	0

Keystone #42 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 240	310	367	422	483	535	VIC
CIC		0	178	337	550	261	60	
Peak		0	10	12	16	13	7	
Pass		6	5	4	1	2	3	

Keystone #43
18 March 1968
0715-0725 EST

Arc 4.0 km
Ref Pt 208°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 220	234	300	360	415	475	VIC
0	194.1			0				
107	195.7			8				0
215	197.2			10				14
322	198.7			19	0			17
429	200.3			40	6	0		31
536	201.8	0		57	44	1		75
644	203.3	0	0	*82	50	9		164
751	204.9	0	7	8	82	28		228
858	206.4	0	*21	0	90	28		159
966	207.9	0	6		39	70	0	203
1073	209.5	0	4		*76	*39	*7	175
1180	211.0	0	2		12	9	0	192
1287	212.6	0	0		0	6		34
1395	214.1	0				0		9
								0
CIC		0	112	641	1081	545	19	
Peak		0	24	82	95	81	7	
Pass		6	5	4	3	1	2	

Keystone #44
18 March 1968
0726-0742 EST

Arc 10.0 km
Ref Pt 216°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 305	368	433	466	540	VIC
0	198.7		0				
107	199.4		5				0
215	200.0	0	6				10
322	200.6	0	7				10
429	201.2	0	12				12
536	201.8	0	10				20
644	202.4	0	13				18
751	203.0	0	15				22
858	203.7	0	17				26
966	204.3	0	22				30
1073	204.9	0	23				38
1180	205.5	0	28				39
1287	206.1	0	45				47
1395	206.7	0	40				77
1502	207.3	0	57				69
1609	208.0	0	*54				97
1717	208.6	0	59	0			93
1824	209.2	0	27	2			101
1931	209.8		6	2			48
2039	210.4		5	2			13
2146	211.0		0	4			11
2253	211.6			4			5
2360	212.3			5			5
2468	212.9			10	0	0	6
2575	213.5			5	5	0	14
2682	214.1			2	14	0	13
2790	214.7			8	22	0	23
2897	215.3			12	*30	0	42
3004	215.9			30	28	0	58
3111	216.6			28	17	0	79
3219	217.2			*30	22	0	61
3326	217.8			10	0	0	71
3433	218.4			2		0	14
3541	219.0			0		0	3
							0
CIC		0	1290	446	393	0	
Peak		0	66	34	31	0	
Pass		5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #45 — Arc 16.0 km
18 March 1968 — Ref Pt 206°
0752-0805 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 228	290	363	434	480	VIC
0	197.5		0				0
107	197.9		2				4
215	198.3		2				4
322	198.7	0	2				4
429	199.0	0	6	0			10
536	199.4	0	5	5			17
644	199.8	0	6	4			17
751	200.2	0	6	6			22
858	200.6	0	6	8	0	0	26
966	201.0	0	6	9	6	0	35
1073	201.3	0	6	7	5	0	31
1180	201.7	0	9	8	6	0	41
1287	202.1	0	13	9	9	0	55
1395	202.5	0	*13	16	7	0	65
1502	202.9	0	6	8	9	0	40
1609	203.3	0	7	21	12	0	62
1717	203.6	0	4	12	17	0	55
1824	204.0	0	4	14	19	0	62
1931	204.4	0	4	*23	28	0	94
2039	204.8	0	4	0	*48	0	82
2146	205.2	0	5		46	0	80
2253	205.6	0	5		45	0	79
2360	205.9		1		42	0	67
2468	206.3		1		25	0	42
2575	206.7		0		21		32
2682	207.1				1		3
2790	207.5				1		3
2897	207.9				0		0
CIC		0	327	426	989	0	
Peak		0	20	28	65	0	
Pass		5	4	3	1	2	

Keystone #46 — Arc 4.0 km
18 March 1968 — Ref Pt 208°
0931-0947 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 168	249	315	372	430	494	545	613	VIC
0	191.0		0		0					0
107	192.6	0	5		8					14
215	194.1	5	5		2	0				23
322	195.7	6	6		10	2				44
429	197.2	6	7	0	8	2				42
536	198.7	6	7	2	17	9				72
644	200.3	6	8	4	39	17				123
751	201.8	6	8	5	*44	29	0			150
858	203.3	*8	7	5	37	29	2			146
966	204.9	1	*10	17	34	20	4	0	0	140
1073	206.4	1	5	14	8	24	20	4	0	122
1180	207.9	0	2	*44	1	57	20	7	0	212
1287	209.5		0	19	1	*50	23	*9	0	163
1395	211.0			8	0	6	59	6	0	122
1502	212.6			2		6	*53	8	0	108
1609	214.1			5		2	50	0	0	88
1717	215.6			2		0	27		0	48
1824	217.2			0			0		0	0
1931	218.7						20		0	30
2039	220.2						2		0	4
2146	221.8						5			7
2253	223.3						0			0
CIC		125	198	360	588	724	810	95	0	
Peak		14	20	49	49	69	68	25	0	
Pass		8	7	6	5	1	2	3	4	

Keystone #47 — Arc 4.0 km
19 March 1968 — Ref Pt 208°
0712-0728 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 425	489	543	585	613	VIC
0	171.1				0	0	0
107	172.6				1	0	1
215	174.1				5	0	4
322	175.7				25	0	24
429	177.2				32	0	30
536	178.8				51	0	47
644	180.3				31	0	29
751	181.8				6	0	5
858	183.4				14	0	13
966	184.9				42	0	39
1073	186.4				21	0	19
1180	188.0				7	0	6
1287	189.5				3	0	3
1395	191.0				6	0	5
1502	192.6				*68	0	64
1609	194.1				38	0	36
1717	195.7			0	1	0	1
1824	197.2			25	5	0	37
1931	198.7			32	5	0	46
2039	200.3			21	3		30
2146	201.8			2	13		15
2253	203.3			43	22		75
2360	204.9			35	14		57
2468	206.4			38	3		52
2575	207.9			72	3		95
2682	209.5			96	8		130
2790	211.0			*160	7		212
2897	212.6			133	1		171
3004	214.1	0		92	0		118
3111	215.6	0		65			83
3219	217.2	0		118			151
3326	218.7	0		120			154
3433	220.2	0	0	29			37
3541	221.8	0	13	1			21
3648	223.3	0	62	13			115
3755	224.9	0	*127	6			208
3862	226.4	0	46	2			76
3970	227.9	0	15	0			24
4077	229.5	0	6				9
4184	231.0	0	6				9
4292	232.5	0	0				0
CIC		0	787	3159	1247	0	
Peak		0	166	166	72	0	
Pass		3	5	1	4	2	

Keystone #48 — Arc 10.0 km
19 March 1968 — Ref Pt 205°
0731-0749 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 235	305	369	426	465	533	VIC
0	190.8						0	0
107	191.4						1	2
215	192.0						1	2
322	192.7						1	2
429	193.3	0					2	4
536	193.9	0	0	0			2	4
644	194.5	0	9	1			6	27
751	195.1	0	19	0			13	56
858	195.7	0	*24	6			14	78
966	196.3	0	7	5			10	39
1073	197.0	0	1	7		0	4	20
1180	197.6	0	1	6		1	5	21
1287	198.2	0	5	6		1	4	26
1395	198.8	0	7	8		5	12	53
1502	199.4	0	5	9		4	2	32
1609	200.0	0	7	14		4	12	61
1717	200.6	0	4	16		0	17	62
1824	201.3	0	7	28		1	37	126
1931	201.9	0	5	17		1	30	92
2039	202.5	0	6	20	0	6	17	82
2146	203.1	0	6	31	2	7	16	103
2253	203.7	0	4	*25	7	14	29	128
2360	204.3	0	1	19	19	8	45	149
2468	204.9	0	1	5	13	14	40	119
2575	205.6	0	1	5	49	92	36	267
2682	206.2	0	2	8	*43	*154	19	325
2790	206.8		0	0	61	142	*30	153
2897	207.4				14	44	6	91
3004	208.0				14	2	0	21
3111	208.6				2	0		7
3219	209.3				16			21
3326	209.9				2			3
3433	210.5				1			1
3541	211.1				0			0
CIC		0	340	668	694	1429	1171	
Peak		0	27	38	64	159	73	
Pass		6	5	4	3	2	1	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #49
19 March 1968
0809-0836 EST

Arc 4.0 km
Ref Pt 208°
SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 475	533	540	594	658	711	773	VIC
0	168.0						0		0
107	169.5						1		2
215	171.1						1		2
322	172.6						27		41
429	174.1						52		80
536	175.7				0		131	0	201
644	177.2				1		204	9	331
751	178.8				0		169	21	295
858	180.3				8		247	*21	427
966	181.8				16	0	233	16	410
1073	183.4				*21	2	249	10	437
1180	184.9			0	13	13	*281	7	483
1287	186.4			1	8	21	285	1	486
1395	188.0			1	2	88	168	0	353
1502	189.5			9	0	*122	100		351
1609	191.0			*10	6	129	8		231
1717	192.6			10	0	90	4		155
1824	194.1			9		17	0		35
1931	195.7			10		2			12
2039	197.2			8		0			7
2146	198.7			8					7
2253	200.3			5					4
2360	201.8		0	1					1
2468	203.3		2	0					2
2575	204.9		2						2
2682	206.4		6						7
2790	207.9		7						6
2897	209.5		6						5
3004	211.0		9						8
3111	212.6		8						7
3219	214.1		10						9
3326	215.6		*10						9
3433	217.2		10						9
3541	218.7		8						7
3648	220.2		7						6
3755	221.8		6						5
3862	223.3		5						4
3970	224.9		5						4
4077	226.4	0	4						3
4184	227.9	4	2						2
4292	229.5	5	2						9
4399	231.0	6	4						12
4506	232.5	9	4						17
4613	234.1	*12	4						22
4721	235.6	12	0						18
4828	237.1	10							16
4935	238.7	4							5
5043	240.2	2							4
5150	241.8	2							4
5257	243.3	2							4
5364	244.8	4							5
5472	246.4	2							4
5579	247.9	5							7
5686	249.4	4							5
5794	251.0	8							13
5901	252.5	2							4
6008	254.1	1							2
6115	255.6	0							0
CIC		265	353	212	216	1300	6191	245	
Peak		14	10	14	24	154	295	32	
Pass		7	6	1	2	3	4	5	

Keystone #50
19 March 1968
1144-1203 EST

Arc 4.0 km
Ref Pt 066°
SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 308	372	430	491	544	615	668	733	VIC
0	052.1				0					0
107	053.7			0	1					2
215	055.2			5	1				0	9
322	056.7		0	7	14				1	34
429	058.3		2	10	14		0		1	44
536	059.8		4	12	10		2		1	46
644	061.3	0	5	8	15	0	5		1	53
751	062.9	1	4	6	19	7	63		*1	162
858	064.4	1	*20	2	68	22	*184		5	486
966	065.9	*15	7	5	*82	1	140		0	412
1073	067.5	13	8	9	1	43	126	0		332
1180	069.0	1	0	*28	2	75	96			334
1287	070.6	0		6	0	160	110	173		712
1395	072.1			4	1	*213	136	*241		966
1502	073.6			2	0	146	8	234		628
1609	075.2			0		123	20	123		430
1717	076.7					9	0	71		127
1824	078.2					2		8		11
1931	079.8					0		5		7
2039	081.3							0		0
CIC		90	139	295	658	2269	2552	2439	33	
Peak		19	23	36	97	224	194	284	6	
Pass		8	7	6	5	4	1	2	3	

Keystone #51
20 March 1968
0702-0713 EST

Arc 4.0 km
Ref Pt 069°
SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 300	360	410	462	538	590	VIC
0	044.4	0						0
107	045.9	5						8
215	047.4	5						8
322	049.0	*7						11
429	050.5	2						4
536	052.0	4				0		6
644	053.6	5				5	0	15
751	055.1	2				9	0	20
858	056.7	2	0		*127		0	221
966	058.2	2	2	0	140	0	0	246
1073	059.7	0	19	5	117	8	0	247
1180	061.3		78	52	5	*77	0	326
1287	062.8		*48	*142	0	6	0	274
1395	064.3		15	86		1	0	142
1502	065.9		19	43		0	0	86
1609	067.4		5	21			0	35
1717	068.9		2	2				7
1824	070.5		0	4				5
1931	072.0			0				0
CIC		97	539	1018	1151	263	0	
Peak		8	87	151	210	79	0	
Pass		6	5	1	2	3	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #52 — Arc 10.0 km
20 March 1968 — Ref Pt 052°
0717-0726 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 304	372	407	470	536	VIC
0	047.6	0					0
107	048.3	4					6
215	048.9	4	0				6
322	049.6	2	2			0	7
429	050.1	5	18			0	33
536	050.7	*6	*29		0	0	64
644	051.3	7	32		2	0	60
751	051.9	5	14	0	2	0	32
858	052.6	5	6	2	*83	0	163
966	053.2	6	7	9	83	0	175
1073	053.8	2	8	28	33	0	109
1180	054.4	5	11	*60	9	0	117
1287	055.0	2	5	54	2	0	85
1395	055.6	2	2	38	2	0	61
1502	056.3	2	0	23	0		35
1609	056.9	0		25			32
1717	057.5			5			6
1824	058.1			9			12
1931	058.7			0			0
CIC		164	409	719	622	0	
Peak		12	42	65	103	0	
Pass		5	4	1	2	3	

Keystone #53 — Arc 16.0 km
20 March 1968 — Ref Pt 053°
0732-0753 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 236	310	370	437	470	537	VIC
0	041.0		0	0				0
107	041.4	0	2	2				7
215	041.8	0	21	32				92
322	042.2	0	*46	*50				185
429	042.6	0	42	44				149
536	043.0	0	26	29				96
644	043.3	0	34	56				155
751	043.7	0	19	50				118
858	044.1	0	31	32				109
966	044.5	0	33	8				71
1073	044.9	0	31	12	0			76
1180	045.3	0	20	12	35		0	103
1287	045.7	0	23	4	70		0	141
1395	046.0	0	20	5	*74	0	0	145
1502	046.4	0	16	4	62	7	0	127
1609	046.8	0	17	8	34	*14	0	108
1717	047.2	0	6	1	23	3	0	47
1824	047.6	0	4	0	11	13	0	40
1931	048.0	0	0		9	5	0	16
2039	048.3	0			4	7	0	9
2146	048.7	0				4	0	6
2253	049.1					2	0	3
2360	049.5					0	0	0
CIC		0	1118	1023	907	155	0	
Peak		0	55	63	78	23	0	
Pass		8	6	4	1	2	3	

Keystone #54 — Arc 4.0 km
25 March 1968 — Ref Pt 044°
0711-0727 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 304	352	400	470	542	600	VIC
0	040.9			0				0
107	042.4			6			0	9
215	043.9			8			0	13
322	045.5			12			0	18
429	047.0			16			0	25
536	048.6	0	0	21			0	33
644	050.1	2	4	15			0	31

Keystone #54 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 304	352	400	470	542	600	VIC
751	051.6	6	9	17	0	0	0	47
858	053.2	*19	25	10	1	2	0	78
966	054.7	9	*71	*21	1	5	0	146
1073	056.2	2	19	89	34	*33	0	208
1180	054.8	0	0	42	*129	1	0	313
1287	059.3			1	27	0	0	53
1395	060.9			0	6		0	11
1502	062.4				4		0	7
1609	063.9				0		0	0
CIC		110	363	740	577	116	0	
Peak		22	104	100	178	35	0	
Pass		6	5	1	2	3	4	

Keystone #55 — Arc 10.0 km
25 March 1968 — Ref Pt 071°
0741-0753 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 286	348	400	460	520	VIC
0	064.8	0			0		0
107	065.4	0			1		3
215	066.0	0		0	57		92
322	066.6	0	0	25	39		100
429	067.2	0	2	*62	43		165
536	067.9	0	*37	34	11		124
644	068.5	0	13	1	76		143
751	069.1	0	0	1	*125		202
858	069.7	0		0	85	0	137
966	070.3	0			25	2	43
1073	070.9	0			0	4	6
1180	071.6	0				9	15
1287	072.2	0				*12	19
1395	072.8	0				5	7
1502	073.4					4	6
1609	074.0					0	0
CIC		0	150	283	1324	100	
Peak		0	63	67	131	16	
Pass		5	4	3	1	2	

Keystone #56 — Arc 16.0 km
25 March 1968 — Ref Pt 070°
0759-0813 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 294	356	420	473	530	594	VIC
0	065.0		0					0
107	065.3		2					4
215	065.7	0	19					32
322	066.1	0	*7					12
429	066.5	0	15			0		26
536	066.9	0	2			2	0	8
644	067.3	0	0			8	0	13
751	067.6	0		0		*41	0	66
858	068.0	0		2		30	0	53
966	068.4	0		30		17	0	76
1073	068.8	0		37	0	26	0	100
1180	069.2	0		*15	5	7	0	42
1287	069.6	0		2	16	1	0	29
1395	069.9	0		0	22	27	0	76
1502	070.3	0			65	6	0	105
1609	070.7	0			50	0	0	73
1717	071.1				*67		0	99
1824	071.5				30		0	44
1931	071.9				4		0	5
2039	072.3				2			3
2146	072.6				0			0
CIC		0	130	251	749	473	0	
Peak		0	28	46	78	49	0	
Pass		6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #57 — Arc 4.0 km
25 March 1968 — Ref Pt 044°
0908-0917 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 261	327	377	438	VIC
0	042.4		0			0
107	044.0		4			5
215	045.5		7		0	11
322	047.0		4		1	7
429	048.6	0	*14		1	24
536	050.1	4	0	0	1	8
644	051.6	6	1	*33	4	66
751	053.2	7	6	23	*8	66
858	054.7	8	6	12	4	39
966	056.2	*9	1	6	6	36
1073	057.8	4	0	9	2	24
1180	059.3	4		25	0	43
1287	060.9	0		5		7
1395	062.4			6		9
1502	063.9			0		0
CIC		110	107	338	77	
Peak		13	18	39	11	
Pass		6	3	2	1	

Keystone #58 — Arc 4.0 km
26 March 1968 — Ref Pt 044°
0704-0715 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 247	305	362	427	459	VIC
0	016.3	0					0
107	017.8	2					4
215	019.4	2					4
322	020.9	2					4
429	022.4	2		0			4
536	024.0	*7		8		0	24
644	025.5	6	0	6		3	18
751	027.0	2	2	73		0	126
858	028.6	2	2	98		0	167
966	030.1	2	*31	121		0	249
1073	031.7	2	5	*2		0	14
1180	033.2	2	4	2		0	13
1287	034.7	0	0	0		0	0
1395	036.3				0	0	0
1502	037.8				*2	0	3
1609	039.3				23	0	30
1717	040.9				4	0	4
1824	042.4				2	0	3
1931	043.9				0	0	0
CIC		95	125	890	89	0	
Peak		7	38	146	50	0	
Pass		5	4	3	1	2	

Keystone #59 — Arc 10.0 km
26 March 1968 — Ref Pt 034°
0719-0731 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 239	310	372	430	467	VIC
0	024.7		0				0
107	025.3		2				4
215	026.0	0	2	0			4
322	026.6	0	5	6			17
429	027.2	0	6	7			21
536	027.8	0	*10	13			39
644	028.4	0	10	9			33
751	029.0	0	9	29			63
858	029.6	0	5	19		0	38
966	030.3	0	5	*51		0	90
1073	030.9	0	0	29		0	46
1180	031.5	0		6		0	9
1287	032.1	0		5		0	7
1395	032.7	0		2		0	4
1502	033.3	0		0		0	0
1609	033.9				0	0	0
1717	034.6				5	0	6
1824	035.2				5	0	6
1931	035.8				23	0	29
2039	036.4				*165	0	209
2146	037.0				53	0	67
2253	037.6				8	0	10
2360	038.3				8	0	10
2468	038.9				0		0
CIC		0	155	499	764	0	
Peak		0	16	60	171	0	
Pass		5	4	3	1	2	

Keystone #60 — Arc 16.0 km
26 March 1968 — Ref Pt 035°
0744-0756 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 305	364	432	460	VIC
0	026.1		0			0
107	026.5	0	1			1
215	026.9	1	2			4
322	027.3	1	3			7
429	027.7	2	4			9
536	028.0	3	4			12
644	028.4	4	5			15
751	028.8	5	7		0	19
858	029.2	*5	13		0	31
966	029.6	5	*10		0	24
1073	030.0	2	8		0	17
1180	030.3	0	2		0	3
1287	030.7		2		0	3
1395	031.1		2		0	3
1502	031.5		2	0	0	3
1609	031.9		0	1	0	0
1717	032.3		1	2	0	3
1824	032.6		2	8	0	11
1931	033.0		3	29	0	37
2039	033.4		1	49	0	58
2146	033.8		1	*109	0	126
2253	034.2		0	89	0	103
2360	034.6			83	0	95
2468	034.9			0	0	0
2575	035.3			0	0	0
2682	035.7			1	0	1
2790	036.1			4	0	5
2897	036.5			9	0	10
3004	036.9			0	0	0
3111	037.3			0	0	0
CIC		77	197	1100	0	
Peak		7	15	123	0	
Pass		4	3	1	2	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #61 — Arc 4.0 km
27 March 1968 — Ref Pt 097°
0711-0722 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 233	300	359	412	445	484	VIC
0	073.9	0		0				0
107	075.4	0		4				5
215	077.0	0		9				14
322	078.5	0	0	6				9
429	080.0	0	1	24				38
536	081.6	0	6	43				74
644	083.1	0	13	*63				118
751	084.7	0	21	22				68
858	086.2	0	*12	0				20
966	087.7	0	6					10
1073	089.3	0	2				0	4
1180	090.8	0	0				0	0
1287	092.3				0	0	0	0
1395	093.9				89	2	0	105
1502	095.4				*112	4	0	132
1609	096.9				80	*56	0	145
1717	098.5				30	21	0	55
1824	100.0				5	4	0	9
1931	101.6				6	17	0	23
2039	103.1				0	4	0	3
2146	104.6					0	0	0
CIC		0	173	409	922	306	0	
Peak		0	29	70	118	60	0	
Pass		6	5	4	1	3	2	

Keystone #62 — Arc 10.0 km
27 March 1968 — Ref Pt 083°
0727-0741 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 230	267	300	357	410	482	VIC
0	073.7	0						0
107	074.3	1						1
215	075.0	4						3
322	075.6	2						2
429	076.2	5	0					5
536	076.8	*6	1	0				7
644	077.4	2	2	2				7
751	078.0	2	5	5				12
858	078.6	0	5	6				11
966	079.3		8	13				23
1073	079.9		*9	*17	0			29
1180	080.5		8	13	8			35
1287	081.1		6	13	4			26
1395	081.7		7	11	12			36
1502	082.3		5	7	20			42
1609	082.9		4	0	22			36
1717	083.6		2		27			42
1824	084.2		1		*29			44
1931	084.8		0		20			29
2039	085.4				16	0		24
2146	086.0				7	2		14
2253	086.6				12	5		25
2360	087.3				7	[illegible]		30
2468	087.9				4			[illegible]
2575	088.5				2			56
2682	089.1				0	*4[illegible]		72
2790	089.7					20	0	33
2897	090.3					0	1	2
3004	090.9					2	1	6
3111	091.6					0	*9	18
3219	092.2						7	13
3326	092.8						2	4
3433	093.4						2	4
3541	094.0						2	2
3648	094.6						0	0
CIC		63	180	246	539	385	69	
Peak		6	14	20	34	48	12	
Pass		5	6	4	3	1	2	

Keystone #63 — Arc 16.0 km
27 March 1968 — Ref Pt 083°
0747-0804 — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 350	387	404	462	VIC
0	082.2			0		0
107	082.6	0		8		8
215	083.0	0		11		11
322	083.3	0		16		17
429	083.7	0		15		16
536	084.1	0		15		16
644	084.5	0		5		5
751	084.9	0	0	8		8
858	085.3	0	1	7		8
966	085.6	0	2	9		11
1073	086.0	0	4	12		14
1180	086.4	0	2	9		11
1287	086.8	0	4	11		13
1395	087.2	0	5	21		25
1502	087.6	0	7	35		41
1609	087.9	0	2	36		39
1717	088.3	0	2	*38		41
1824	088.7	0	0	18		18
1931	089.1	0	8	38		45
2039	089.5	0	4	19		22
2146	089.9	0	*27	18		37
2253	090.2	0	4	18		21
2360	090.6	0	0	0		0
2468	091.0	0				0
2575	091.4	0				0
2682	091.8	0				0
2790	092.2	0				0
2897	092.6				0	0
3004	092.9				1	2
3111	093.3				18	27
3219	093.7				*35	54
3326	094.1				16	25
3433	094.5				4	5
3541	094.9				1	2
3648	095.2				0	0
CIC		0	204	1048	213	
Peak		0	28	44	42	
Pass		3	4	1	2	

Keystone #64 — Arc 4.0 km
28 March 1968 — Ref Pt 056°
0657-0717 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 270	324	343	344	457	507	538	606	VIC
0	051.3			0						0
107	052.9	0	0	2						1
215	054.4	1	5	5						8
322	055.9	4	*15	*55						34
429	057.5	7	7	6					0	18
536	059.0	7	0	4		0			2	15
644	060.6	8		0	0	6			2	29
751	062.1	*12			7	*7	0		*7	55
858	063.6	7			12	66	2	0	4	180
966	065.2	6			31	28	2	*88	0	235
1073	066.7	0			*51	5	*111	13		225
1180	068.2				15	0	10	4		39
1287	069.8				6		5	0		14
1395	071.3				4		0			5
1502	072.9				0					0
CIC		146	77	203	358	318	375	298	43	
Peak		12	23	57	58	101	150	95	10	
Pass		8	7	6	1	2	4	3	5	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #65 — Arc 10.0 km
28 March 1968 — Ref Pt 061°
0723-0744 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 230	270	320	375	381	454	532	570	VIC
0	054.8	0	0							0
107	055.4	0	2							3
215	056.0	0	1							1
322	056.6	0	*6			0				7
429	057.3	0	2			2				5
536	057.9	0	1		0	8				10
644	058.5	0	0	0	2	*19				22
751	059.1	0		2	9	15				27
858	059.7	0		16	2	14				39
966	060.3	0		12	6	5				26
1073	060.9			*21	16	6				49
1180	061.6			19	*35	11				66
1287	062.2			4	14	9				26
1395	062.8			4	2	0				7
1502	063.4			0	0		0	0		0
1609	064.0						1	1		4
1717	064.6						15	8		43
1824	065.3						26	13		71
1931	065.9						*24	*31		98
2039	066.5						20	16		65
2146	067.1						7	9		28
2253	067.7						0	2		4
2360	068.3							0	0	0
2468	068.9								2	2
2575	069.6								5	5
2682	070.2								*10	11
2790	070.8								5	5
2897	071.4								4	4
3004	072.0								0	0
CIC		0	36	220	249	253	265	232	73	
Peak		0	9	26	42	20	49	36	14	
Pass		8	7	6	1	5	2	3	4	

Keystone #66 — Arc 16.0 km
28 March 1968 — Ref Pt 064°
0754-0803 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 330	354	410	507	520	605	VIC
0	059.3	0	0					0
107	059.7	2	1					3
215	060.1	4	9					12
322	060.5	6	8					12
429	060.9	*3	9	0				12
536	061.3	2	6	2				13
644	061.6	1	12	6				25
751	062.0	0	8	11				30
858	062.4		*17	*10				40
966	062.8		5	7				19
1073	063.2		4	8				20
1180	063.6		4	5				13
1287	063.9		5	7				19
1395	064.3		1	6				13
1502	064.7		2	0				2
1609	065.1		0					2
1717	065.5						0	7
1824	065.9					0	0	22
1931	066.3					2	0	29
2039	066.6					4	0	22
2146	067.0				*28	4	0	46
2253	067.4				23	12	0	49
2360	067.8				8	19	0	36
2468	068.2				5	13	0	24
2575	068.6				6	12	0	24
2682	068.9				5	22	0	36
2790	069.3				0	18	0	23
2897	069.7					*27	0	35
3004	070.1					9	0	12
3111	070.5					1	0	2
3249	070.9					0	0	0
CIC		53	261	177	356	404	0	
Peak		7	19	18	33	30	0	
Pass		6	5	4	1	2	3	

Keystone #67 — Arc 4.0 km
29 March 1968 — Ref Pt 053°
0701-0712 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 260	347	397	443	464	527	620	VIC
0	033.0	0							0
107	034.5	1							3
215	036.0	4							8
322	037.6	*8							19
429	039.1	8							19
536	049.7	6							13
644	042.2	4		0					8
751	043.7	9		7					30
858	045.3	4	0	9		0			20
966	046.8	5	1	67		5			104
1073	048.3	2	6	50		9	0	0	90
1180	049.9	1	4	*106		*62	5	0	225
1287	051.4	0	*48	68		6	19	0	220
1395	052.9		12	6	0	2	*53	0	142
1502	054.5		5	4	65	0	1	0	74
1609	056.0		2	0	*60		1	0	61
1717	057.6		0		4		0	0	3
1824	059.1				0			0	0
CIC		146	220	909	369	242	226	0	
Peak		12	51	109	84	72	109	0	
Pass		7	6	5	1	4	2	3	

Keystone #68 — Arc 10.0 km
29 March 1968 — Ref Pt 046°
0723-0738 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 223	307	357	401	449	527	VIC
0	045.3			0	0			0
107	046.0			1	6			9
215	046.6	0		7	7			17
322	047.2	0		11	[illegible]			19
429	047.8	0	0	*14	2			20
536	048.4	0	6	0	5			16
644	049.0	0	4	4	2			13
751	049.6	0	0	8	10			23
858	050.3	0	8	6	10			35
966	050.9	0	0	9	*7	0	0	20
1073	051.5	0	9	12	2	1	2	41
1180	052.1	0	5	6	0	9	2	36
1287	052.7	0	7	11		*9	*9	60
1395	053.3	0	*13	0		7	4	42
1502	053.9	0	6			5	6	30
1609	054.6	0	0			7	4	19
1717	055.2					8	1	16
1824	055.8					8	0	14
1931	056.4					7		12
2039	057.0					0		0
CIC		0	163	249	162	176	79	
Peak		0	14	14	13	13	12	
Pass		6	5	4	3	1	2	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #69 — Arc 16.0 km — Ref Pt 058° — 29 March 1968 — 0751-0815 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 364	402	444	507	591	VIC
0	043.7	0					0
107	044.1	2					2
215	044.5	2					2
322	044.9	3					3
429	045.3	3					3
536	045.7	3					3
644	046.0	3					3
751	046.4	4					4
858	046.8	3			0		3
966	047.2	3			3		10
1073	047.6	3			3		8
1180	048.0	3	0		5		12
1287	048.3	4	1		5		14
1395	048.7	3	1		8		20
1502	049.1	3	4		6		20
1609	049.5	3	4		11		29
1717	049.9	4	4		11		31
1824	050.3	3	4	0	9		25
1931	050.7	3	8	1	6		25
2039	051.0	4	7	3	4		23
2146	051.4	3	*12	5	6		35
2253	051.8	4	10	8	4		32
2360	052.2	5	8	6	4		30
2468	052.6	*5	6	*8	3		27
2575	053.0	3	2	7	6		26
2682	053.3	1	4	6	8		29
2790	053.7	2	3	8	10		37
2897	054.1	3	1	5	11		32
3004	054.5	2	0	4	11		29
3111	054.9	0	4	4	9		28
3219	055.3		5	4	6		24
3326	055.6		3	2	7		18
3433	056.0		1	1	9		19
3541	056.4		0	0	8		16
3648	056.8			2	10		22
3755	057.2			0	9	0	18
3862	057.6				11	0	22
3970	057.9				*11	5	31
4077	058.3				8	1	19
4184	058.7				4	1	11
4292	059.1				2	1	6
4399	059.5				3	1	7
4506	059.9				2	0	3
4613	060.3				2	0	4
4721	060.6				2	2	7
4828	061.0				3	*4	14
4935	061.4				7	1	16
5043	061.8				11	1	24
5150	062.2				4	2	10
5257	062.6				4	3	16
5364	062.9				8	4	24
5472	063.3				0	2	5
5579	063.7				0	2	3
5686	064.1					0	0
CIC		234	255	207	789	80	
Peak		7	12	9	13	5	
Pass		5	1	2	3	4	

Keystone #70 — Arc 4.0 km — Ref Pt 053° — 29 March 1968 — 1031-1046 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 213	256	320	368	415	426	547	623	VIC
0	036.0		0	0						0
107	037.6		0	2						3
215	039.1		0	4						6
322	040.7		1	4				0	0	8
429	042.2		4	5	0			1	1	17
536	043.7		2	4	1			4	3	26
644	045.3		2	5	3			9	*5	47
751	046.8		4	*12	5			*16	4	78
858	048.3		4	2	*25	0		2	4	52
966	049.9		*8	2	15	1	0	4	3	51
1073	051.4		1	0	14	2	1	2	0	27

Keystone #70 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 213	256	320	368	415	426	547	623	VIC
1180	052.9		2		10	5	5	1	4	36
1287	054.5	0	0		8	3	*25	0	5	65
1395	056.0	2			3	*7	19		3	50
1502	057.6	2			0	1	2		1	9
1609	059.1	*4				0	0		0	5
1717	060.6	3								3
1824	062.2	1								1
1931	063.7	0								0
CIC		32	81	112	233	55	148	107	90	
Peak		5	10	16	30	8	29	17	6	
Pass		8	7	6	5	4	1	2	3	

Keystone #71 — Arc 4.0 km — Ref Pt 207° — 30 March 1968 — 0657-0728 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 291	342	382	404	497	541	597	642	705	765	VIC
0	180.8									0		0
107	182.4									4		6
215	183.9	0		0				0		13		21
322	185.4	0		5		0	0	2		*54		96
429	187.0	0	0	7		12	13	7	0	10		70
536	188.5	0	2	29		53	35	32	13	22		268
644	190.0	0	6	*33	0	37	34	59	45	16		317
751	191.6	0	*9	22	22	*72	*75	*67	60	1		471
858	193.1	0	7	6	9	46	59	0	*82	0		309
966	194.7	0	5	2	17	27	24		9		0	128
1073	196.2	0	6	0	*36	0	5		12		*9	99
1180	197.7	0	0		29		0		0		1	46
1287	199.3	0			6						0	9
1395	200.8				2							4
1502	202.3				0							0
CIC		0	99	297	347	704	698	479	631	344	29	
Peak		0	12	39	50	74	79	81	87	60	19	
Pass		9	10	8	1	2	3	4	5	6	7	

Keystone #72 — Arc 10.0 km — Ref Pt 193° — 30 March 1968 — 0735-0759 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 363	415	462	522	604	652	684	764	831	VIC
0	181.3							0		0	0
107	181.9							6		2	13
215	182.5			0		0		16		17	55
322	183.1			1		2		36		2	63
429	183.7			7		19		*36		*18	129
536	184.3		0	12		44	0	30	0	1	140
644	185.0		2	16	0	51	23	0	6	0	150
751	185.6		6	32	14	*48	42		*31		270
858	186.2		10	*38	30	17	57		17		250
966	186.8		*11	34	36	20	*58		22		270
1073	187.4		8	23	55	25	54		16		283
1180	188.0		10	13	*60	1	42		0		192
1287	188.6	0	9	7	54	0	27				153
1395	189.3	1	10	9	44		5				117
1502	189.9	2	7	0	35		0				78
1609	190.5	5	7		0						16
1717	191.1	5	5								13
1824	191.7	5	0								6
1931	192.3	*8									11
2039	192.9	7									10
2146	193.6	5									6
2253	194.2	2									3
2360	194.8	5									6
2468	195.4	0									0
CIC		125	248	549	939	651	876	354	265	119	
Peak		9	13	39	62	62	61	40	36	25	
Pass		2	1	3	4	5	6	7	8	9	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #73 — Arc 16.0 km
30 March 1968 — Ref Pt 191°
0805-0827 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 414	460	494	592	658	721	751	840	873	VIC
0	182.1						0		0		0
107	182.5						6		2		11
215	182.9						19		7		34
322	183.3				0	0	27		25		74
429	183.7				5	2	35	0	*28		102
536	184.0				13	6	42	4	7	0	106
644	184.4				30	9	*39	23	7	1	179
751	184.8				42	19	27	19	0	*6	190
858	185.2				*45	28	19	*27		5	216
966	185.6				43	40	17	13		0	205
1073	186.0				39	46	7	5			181
1180	186.3				44	*47	7	8			199
1287	186.7		0	0	29	38	4	4			139
1395	187.1		2	2	7	27	0	0			67
1502	187.5		5	5	7	21					64
1609	187.9		16	23	2	15					89
1717	188.3		*31	*43	0	8					123
1824	188.6	0	25	23		5					76
1931	189.0	2	20	14		0					48
2039	189.4	4	14	4							25
2146	189.8	4	10	5							23
2253	190.2	5	8	0							14
2360	190.6	7	8								17
2468	190.9	*7	7								16
2575	191.3	6	5								12
2682	191.7	5	2								8
2790	192.1	0	0								0
CIC		109	440	337	873	890	704	287	218	33	
Peak		9	38	44	46	49	46	29	28	8	
Pass		2	1	3	4	5	6	7	8	9	

Keystone #74 — Arc 4.0 km
1 April 1968 — Ref Pt 144°
0658-0717 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 150	210	277	330	392	457	522	537	570	VIC
0	140.9						0				0
107	142.4						1				2
215	144.0						6			0	10
322	145.5	0					*38	0		0	66
429	147.0	6	0				24	6	0	0	58
536	148.6	6	1				14	6	20	0	54
644	150.1	7	6	0		0	21	*22	*23	0	95
751	151.6	1	22	6		2	20	7	0	0	94
858	153.2	6	4	4		9	15	2	6	0	69
966	154.7	6	9	13		*46	9	0	1		140
1073	156.2	*9	7	13	0	21	0		0		82
1180	157.8	9	*33	*21	7	0					116
1287	159.3	6	27	2	21						90
1395	160.9	0	6	0	13						29
1502	162.4		0		4						5
1609	163.9				*22						34
1717	165.5				15						23
1824	167.0				5						7
1931	168.5				0						0
CIC		159	328	165	244	224	423	122	142	0	
Peak		10	38	24	30	50	82	38	25	0	
Pass		9	8	7	6	5	1	2	4	3	

Keystone #75 — Arc 10.0 km
1 April 1968 — Ref Pt 132°
0726-0753 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 205	280	332	384	462	518	573	636	690	745	VIC
0	122.7			0								0
107	123.3	0		1								1
215	124.0	2	0	1								5
322	124.6	3	3	7				0				20
429	125.2	5	0	7				4				24
536	125.8	9	3	*8				5				41
644	126.4	*9	5	7				12				55
751	127.0	6	7	5				7	0			41
858	127.6	4	5	5			0	17	1	0		50
966	128.3	3	3	4		0	3	8	2	2	0	37
1073	128.9	1	2	3		5	9	10	4	2	1	60
1180	129.5	0	7	3		5	10	14	11	6	1	86
1287	130.1		10	1		14	10	25	*20	3	2	136
1395	130.7		*3	0		*18	9	*27	15	5	4	127
1502	131.3		1			9	6	12	8	7	7	78
1609	131.9		0		0	6	5	7	6	6	7	57
1717	132.6				3	2	3	11	4	7	8	59
1824	133.2				*18	0	4	14	6	8	7	90
1931	133.8				6		5	16	7	8	8	81
2039	134.4				8		8	11	11	*12	6	87
2146	135.0				7		9	5	11	10	8	77
2253	135.6				1		15	2	11	4	6	58
2360	136.3				0		13	0	14	3	11	61
2468	136.9						17		6	4	6	49
2575	137.5						*22		11	7	13	79
2682	138.1						7		12	6	*14	59
2790	138.7						0		7	8	7	32
2897	139.3								6	1	6	18
3004	139.9								5	4	6	23
3111	140.6								0	7	8	19
3219	141.2									2	5	11
3326	141.8									0	5	8
3433	142.4										0	0
CIC		117	136	143	121	167	453	589	505	338	417	
Peak		12	14	8	24	21	25	28	27	15	16	
Pass		10	9	8	1	2	3	4	5	6	7	

Keystone #76 — Arc 4.0 km
2 April 1968 — Ref Pt 081°
0711-0728 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 357	420	470	537	605	663	715	VIC
0	071.7	0							0
107	073.3	9							16
215	074.8	12							20
322	076.3	11	0						18
429	077.9	15	11	0					41
536	079.4	13	58	1					111
644	080.9	20	99	8					195
751	082.5	*17	*113	0					200
858	084.0	9	81	*99	0				293
966	085.6	0	2	88	2				166
1073	087.1		12	40	22				119
1180	088.6		43	47	57				240
1287	090.2		0	66	*100				284
1395	091.7		8	11	84			0	180
1502	093.2		0	0	69			0	124
1609	094.8				0			0	0
1717	096.3					0	0	0	0
1824	097.9					1	1	0	4
1931	099.4					0	6	0	9
2039	100.9					17	*55	0	110
2146	102.5					*92	27	0	194
2253	104.0					26	0	0	43
2360	105.5					2		0	4
2468	107.1					23			39
2575	108.6					1			2
2682	110.1					0			0
CIC		303	1223	1029	956	466	253	0	
Peak		34	115	109	102	99	57	0	
Pass		7	6	1	2	3	4	5	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #77
2 April 1968
0737-0811 EST

Arc 10.0 km
Ref Pt 084°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 234	279	348	430	464	537	561	650	VIC
0	059.4		0							0
107	060.0		4							5
215	060.6		2							4
322	061.2	0	8							12
429	061.8	6	7							18
536	062.4	9	11							27
644	063.0	14	*14							38
751	063.7	6	7							18
858	064.3	9	5							18
966	064.9	8	2	0						13
1073	065.5	16	8	4						39
1180	066.1	13	9	5						39
1287	066.7	6	6	5						25
1395	067.4	5	4	6						23
1502	068.0	5	11	4						29
1609	068.6	9	4	4						24
1717	069.2	18	2	6						36
1824	069.8	21	7	7						50
1931	070.4	*27	8	*18						80
2039	071.0	8	5	19						55
2146	071.7	19	6	19						69
2253	072.3	18	9	5						45
2360	072.9	6	7	5		0				27
2468	073.5	0	8	0		4				17
2575	074.1		9		0	12				31
2682	074.7		7		4	51				89
2790	075.3		8		4	41				76
2897	076.0		9		*74	56				209
3004	076.6		9		40	*70				175
3111	077.2		9		30	38				116
3219	077.8		7		14	36				84
3326	078.4		7		6	33				66
3433	079.0		5		2	40				67
3541	079.6		5		4	31				57
3648	080.3		0		8	20			0	41
3755	080.9				1	21	0	7		42
3862	081.5				0	20	8	9		53
3970	082.1					9	20	15		62
4077	082.7					13	20	16		69
4184	083.3					26	11	15		73
4292	083.9					26	23	14		88
4399	084.6					6	24	21		72
4506	085.2					0	35	21		77
4613	085.8						30	12		57
4721	086.4						28	15		59
4828	087.0						35	23		80
4935	087.6						29	15		61
5043	088.3						47	11		76
5150	088.9						45	12	0	76
5357	089.5						*48	14	1	86
5364	090.1						16	20	5	62
5472	090.7						12	14	4	44
5579	091.3						5	26	2	50
5686	091.9						6	34	5	70
5794	092.6						17	40	4	91
5901	093.2						21	*42	1	93
6008	093.8						8	30	4	65
6115	094.4						5	14	2	33
6223	095.0						0	15	1	26
6330	095.6							9	4	22
6437	096.2							12	5	29
6545	096.9							18	4	35
6652	097.5							8	2	18
6759	098.1							21	4	40
6867	098.7							21	4	40
6974	099.3							9	2	20
7081	099.9							7	6	24
7188	100.5							4	9	27
7296	101.2							0	6	14
7403	101.8								*10	25
7510	102.4								7	17
7618	103.0								6	14
7725	103.6								7	17
7832	104.2								8	19
7939	104.9								7	17
8047	105.5								6	14
8154	106.1								1	3
8261	106.7								0	0
CIC		637	658	295	533	1576	1409	1612	357	
Peak		35	19	25	91	74	55	49	13	
Pass		8	7	6	1	2	3	4	5	

Keystone #78
3 April 1968
0658-0716 EST

Arc 4.0 km
Ref Pt 045°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 304	364	404	472	554	600	666	724	775	VIC
0	023.4								0		0
107	025.0								2	0	3
215	026.5								19	0	27
322	028.0							0	31	0	45
429	029.6	0	0	0				17	30	0	72
536	031.1	0	5	5				35	*53	0	148
644	032.7	0	5	6				94	40	0	228
751	034.2	0	5	6				92	19	0	194
858	035.7	0	7	10				82	7	0	170
966	037.3	0	8	22		0		91	0	0	193
1073	038.8	0	10	*46		25		99		0	288
1180	040.3	0	13	39		*132	0	*106			475
1287	041.9	0	*23	0		109	25	5			262
1395	043.4	0	0		0	72	37	0			178
1502	044.9	0	5		*25	27	104				258
1609	046.5	0	0		19	28	*108				247
1717	048.0				5	0	59				97
1824	049.6				0		47				71
1931	051.1						25				38
2039	052.6						8				12
2146	054.2						0				0
CIC		0	228	383	138	1121	1187	1780	575	0	
Peak		0	31	50	34	148	139	117	57	0	
Pass		3	2	1	4	5	6	7	8	9	

Keystone #79
3 April 1968
0721-0747 EST

Arc 10.0 km
Ref Pt 035°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 360	434	475	534	608	674	719	784	VIC
0	017.1						0	0		0
107	017.7						5	8	0	19
215	018.4						8	5	0	19
322	019.0						24	8	0	48
429	019.6						16	6	0	32
536	020.2						23	16	0	58
644	020.8						30	22	0	77
751	021.4						23	21	0	65
858	022.0						25	5	0	44
966	022.7						28	*43	0	104
1073	023.3						28	13	0	60
1180	023.9						*45	10	0	82
1287	024.5						38	31	0	102
1395	025.1						35	22	0	84
1502	025.7						42	2	0	65
1609	026.3						43	2	0	67
1717	027.0						24	0	0	36
1824	027.6						35		0	51
1931	028.2						35		0	51
2039	028.8						32			48
2146	029.4	0					10			15
2253	030.0	7				0	7			24
2360	030.6	4				8	12			39
2468	031.3	2				20	7			52
2575	031.9	7				15	2			45
2682	032.5	7			0	16	0			44
2790	033.1	8			*14	10				60
2897	033.7	*7			17	32				105
3004	034.3	5			0	24				54
3111	034.9	4			8	34				84
3219	035.6	8			10	21				73
3326	036.2	4			8	*35				86
3433	036.8	0			0	29				54
3541	037.4		0		0	9				17
3648	038.0		10		8	12				52
3755	038.6		22		14	0				58
3862	039.3		19		19					61
3970	039.9		14		6					32
4077	040.5		21	0	10					50
4184	041.1		13	29	0					58
4292	041.7		54	25						117
4399	042.3		*53	*30						122
4506	042.9		34	20						78
4613	043.6		29	12						60

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #79 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 360	434	475	534	608	674	719	784	VIC
4721	044.2		10	6						24
4828	044.8		13	6						27
4935	045.4		14	0						21
5043	046.0		4							5
5150	046.6		0							0
CIC		175	883	363	327	757	1651	612	0	
Peak		15	62	35	30	40	51	47	0	
Pass		2	1	3	4	5	6	7	8	

Keystone #80 — Arc 16.0 km — Ref Pt 025° — 3 April 1968 — 0754-0821 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 368	428	472	548	609	677	726	VIC
0	014.6						0		0
107	015.0						2		4
215	015.3						8		13
322	015.7						15		23
429	016.1						14		22
536	016.5						12	0	18
644	016.9						14	4	26
751	017.3						14	6	29
858	017.7					0	15	12	39
966	018.0					5	16	19	57
1073	018.4					8	*20	*18	69
1180	018.8					13	14	16	65
1287	019.2					12	8	14	51
1395	019.6					9	10	13	49
1502	020.0					8	2	10	31
1609	020.3					14	0	12	39
1717	020.7					*17		10	43
1824	021.1					13		10	35
1931	021.5					10		12	33
2039	021.9					14		6	32
2146	022.3					14		0	24
2253	022.6					14			24
2360	023.0					13			22
2468	023.4					10			18
2575	023.8					10			18
2682	024.2					8			14
2790	024.6					5			8
2897	024.9					7			12
3004	025.3					10			18
3111	025.7					12			20
3219	026.1					9			16
3326	026.5					10			18
3433	026.9					6			10
3541	027.3					0			0
3648	027.6				0				0
3755	028.0				9				17
3862	028.4				13				23
3970	028.8	0	0		10				19
4077	029.2	0	12		12				37
4184	029.6	0	5	0	14				32
4292	029.9	0	6	5	14				41
4399	030.3	0	5	5	*17				45
4506	030.7	0	4	5	17				44
4613	031.1	0	8	4	17				49
4721	031.5	0	10	5	17				53
4828	031.9	0	23	8	12				66
4935	032.2	0	19	10	10				61
5043	032.6	0	*27	23	12				95
5150	033.0	0	23	28	12				98
5257	033.4	0	25	25	12				97
5364	033.8	0	24	16	14				85
5472	034.2	0	17	*27	10				86
5579	034.6	0	13	25	6				69
5686	034.9	0	21	10	0				46
5794	035.3	0	8	0					11
5901	035.7	0	0	0					0
6008	036.1			7					1
6115	036.5			0					0
CIC		0	663	579	651	717	469	459		
Peak		0	29	34	21	20	22	21		
Pass		7	6	5	4	1	2	3		

Keystone #81 — Arc 4.0 km — Ref Pt 044° — 4 April 1968 — 0705-0720 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 61	168	213	298	358	408	478	558	VIC
0	013.2	0								0
107	014.8	2								6
215	016.3	2								6
322	017.8	2								6
429	019.4	3				0		0		8
536	020.9	3		0		2		3		16
644	022.4	*4		1		7		11		45
751	024.0	3		2		*14		3		38
858	025.5	3		4		12		8		49
966	027.0	2	0	*5		15		17	0	69
1073	028.6	2	1	5	0	6		20	5	65
1180	030.1	2	4	1	1	4		*22	0	69
1287	031.7	2	3	1	2	1	0	9	1	38
1395	033.2	2	*10	0	4	0	*3	1	*1	44
1502	034.7	2	11		*8		4	0	0	48
1609	036.3	1	14		7		2		2	51
1717	037.8	1	3		2		1		1	13
1824	039.3	0	2		5		0		0	15
1931	040.9		0		1				0	2
2039	042.4				1					1
2146	043.9				0					0
CIC		96	136	52	89	170	28	271	17	
Peak		5	20	9	10	20	8	24	6	
Pass		8	7	6	5	4	3	2	1	

Keystone #82 — Arc 10.0 km — Ref Pt 029° — 4 April 1968 — 0735-0749 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 84	175	235	306	355	423	464	VIC
0	021.0					0			0
107	021.6					2			3
215	022.2			0		2			3
322	022.8			1		3			8
429	023.4			1		2			5
536	024.0			2		3	0		8
644	024.6			2		4	1		10
751	025.3			2	0	3	3	0	12
858	025.9		0	3	2	*4	3	2	19
966	026.5		1	3	2	3	3	3	24
1073	027.1	0	3	3	3	3	2	3	26
1180	027.7	0	2	2	3	4	3	*5	26
1287	028.3	0	3	3	4	4	2	5	29
1395	028.9	0	*3	3	4	2	2	4	28
1502	029.6	0	3	*3	5	0	*5	4	32
1609	030.2	0	3	2	5		3	4	25
1717	030.8	0	2	1	*4		3	4	20
1824	031.4	0	1	0	5		4	4	20
1931	032.0	0	1		4		3	3	16
2039	032.6	0	1		3		2	1	11
2146	033.3	0	3		2		0	0	7
2253	033.9	0	2		0				4
2360	034.5		3						5
2468	035.1		3						6
2575	035.7		3						6
2682	036.3		3						6
2790	036.9		2						3
2897	037.6		1						2
3004	038.2		1						2
3111	038.8		2						3
3219	039.4		2						4
3326	040.0		0						0
CIC		0	132	83	129	111	104	118		
Peak		0	5	5	6	5	5	7		
Pass		7	6	5	4	3	2	1		

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #83 — Arc 4.0 km
4 April 1968 — Ref Pt 044°
0759-0810 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 109	162	240	316	339	436	VIC
0	019.4			0				0
107	020.9			2				4
215	022.4			2				4
322	024.0			4				9
429	025.5	0		7		0		14
536	027.0	1	0	6	0	2		17
644	028.6	1	1	*8	0	3		26
751	030.1	1	2	5	3	7		30
858	031.7	*2	*4	0	6	*26		61
966	033.2	1	2		*28	2	0	45
1073	034.7	1	1		21	2	1	36
1180	036.3	0	0		7	0	2	14
1287	037.8				3	0	7	22
1395	039.3				0		*6	16
1502	040.9						2	6
1609	042.4						2	4
1717	043.9						0	0
CIC		18	31	97	193	121	57	
Peak		3	7	10	30	27	10	
Pass		6	5	4	1	2	3	

Keystone #84 — Arc 4.0 km
5 May 1968 — Ref Pt 217°
0558-0614 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 156	242	302	360	412	468	VIC
0	218.5					0		0
107	220.0					17	0	25
215	221.6					29	0	42
322	223.1					*111	0	161
429	224.6					71	0	102
536	226.2	0				30	0	43
644	227.7	0				0	0	0
751	229.2	0		0			0	0
858	230.8	0		13			0	20
966	232.3	0	0	*51	0		0	80
1073	233.9	0	7	60	10		0	124
1180	235.4	0	*9	28	*140		0	268
1287	236.9	0	8	0	26			53
1395	238.5	0	5		7			19
1502	240.0	0	0		0			0
CIC		0	83	435	525	741	0	
Peak		0	10	101	181	140	0	
Pass		6	5	4	3	1	2	

Keystone #85 — Arc 10.0 km
5 May 1968 — Ref Pt 234°
0628-0639 EST — SO2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 290	350	414	481	542	VIC
0	224.7				0		0
107	225.3		0		4		7
215	226.0	0	5		2		12
322	226.6	0	9		12		34
429	227.2	0	*16		3		32
536	227.8	0	8		14		37
644	228.4	0	11		*15		44
751	229.0	0	5		4	0	16
858	229.6	0	2	0	0	1	5
966	230.3	0	1	18		2	36
1073	230.9	0	1	*37		2	69
1180	231.5	0	1	40		*3	77
1287	232.1	0	5	27		2	58
1395	232.7	0	0	9		1	18
1502	233.3			16		0	27
1609	233.9			9			16
1717	234.6			4			7
1824	235.2			0			0
CIC		0	182	457	154	31	
Peak		0	18	45	20	4	
Pass		5	4	1	2	3	

Keystone #86 — Arc 16.0 km
5 May 1968 — Ref Pt 235°
0657-0717 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 162	222	296	352	392	463	VIC
0	228.0				0			0
107	228.4				1			1
215	228.8			0	2		0	3
322	229.2			3	0		0	6
429	229.6			5	1		0	9
536	230.0			4	1		0	9
644	230.3			6	6		0	18
751	230.7	0		7	7		0	21
858	231.1	3	0	8	8		0	27
966	231.5	2	4	10	6	0	0	35
1073	231.9	3	7	11	10	*60	0	136
1180	232.3	*3	6	14	10	11	0	68
1287	232.6	3	5	13	14	2	0	57
1395	233.0	4	4	14	4	1	0	44
1502	233.4	3	4	13	2	3	0	41
1609	233.8	2	3	*15	13	1	0	54
1717	234.2	1	3	11	4	0	0	30
1824	234.6	0	3	10	4		0	28
1931	234.9		6	8	32		0	64
2039	235.3		*13	7	43		0	91
2146	235.7		9	5	*55		0	96
2253	236.1		5	4	33			58
2360	236.6		3	4	17			34
2468	236.9		2	3	20			35
2575	237.3		0	0	22			28
2682	237.6				14			18
2790	238.0				6			8
2897	238.4				0			0
CIC		65	218	502	952	220	0	
Peak		5	14	34	59	65	0	
Pass		6	5	4	3	1	2	

Keystone #87 — Arc 4.0 km
5 May 1968 — Ref Pt 268°
0834-0905 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 82	173	230	284	362	423	482	533	600	662	VIC
0	217.2	0										0
107	218.8	3										7
215	220.3	3										8
322	221.8	3										7
429	223.4	6										14
536	224.9	*11										28
644	226.5	10										23
751	228.0	8	0									20
858	229.5	7	2									21
966	231.1	8	*6		0							32
1073	232.6	3	3		1							16
1180	234.1	9	1		2							28
1287	235.7	2	1	0	4	0						13
1395	237.2	4	2	2	3	3						24
1502	238.8	2	2	3	4	5						28
1609	240.3	1	1	2	6	7		0				31
1717	241.8	1	2	2	8	5		4				39
1824	243.4	0	2	*2	3	17		8				55
1931	244.9		0	9	3	8		7			0	43
2039	246.4			0	*16	11		13	0		0	67
2146	248.0				16	5		9	7		0	58
2253	249.5				4	5	0	11	7		0	43
2360	251.0				5	5	1	14	2		0	44
2468	252.6				0	7	4	15	3		0	43
2575	254.1					*18	6	21	1		0	76
2682	255.7					4	6	31	5	0	0	69
2790	257.2					0	5	23	7	6	0	63
2897	258.7						15	21	17	56	0	177
3004	260.3						30	*55	27	68	0	289
3111	261.8						42	23	44	*90	0	324
3219	263.3						*68	35	70	24	0	313
3326	264.9						20	1	*90	0	0	176
3433	266.4						50	0	77		0	201
3541	267.9						7		25		0	50
3648	269.5						4		12		0	25
3755	271.0						0		4		0	7
3862	272.6								0			0
CIC		231	60	55	216	286	741	824	1132	697	0	
Peak		13	7	15	21	24	70	59	99	92	0	
Pass		10	9	8	7	6	1	2	3	4	5	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #88 — Arc 4.0 km
6 May 1968 — Ref Pt 181°
0600-0617 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 234	310	354	443	469	561	VIC
0	124.1			0				0
107	125.6			6				10
215	127.2			10				18
322	128.7			13				23
429	130.2			14				25
536	131.8			12				21
644	133.3			13				23
751	134.8			10				18
858	136.4			10				18
966	137.9			13				23
1073	139.5			12				21
1180	141.0			14				25
1287	142.5	0		14				25
1395	144.1	7		14				39
1502	145.6	6		17				42
1609	147.1	9		17				50
1717	148.7	6		20				47
1824	150.2	7		19				47
1931	151.8	*8		13				39
2039	153.3	8		12			0	37
2146	154.8	6		14			1	39
2253	156.4	8	0	20			*3	60
2360	157.9	4	9	28			0	71
2468	159.4	4	7	24		0		61
2575	161.0	0	30	30		12		120
2682	162.5		25	*38	0	*50		187
2790	164.0		42	35	31	30		223
2897	165.6		42	12	127	5		289
3004	167.1		42	6	136	6		295
3111	168.7		*42	4	*142	0		291
3219	170.2		19	7	110	15		234
3326	171.7		8	5	77	60		235
3433	173.3		6	0	77	28		172
3541	174.8		0		75	0		115
3648	176.3				91			140
3755	177.9				69			106
3862	179.4				10			16
3970	180.9				0			0
CIC		205	774	1349	2713	585	13	
Peak		10	49	43	149	65	7	
Pass		6	5	4	1	2	3	

Keystone #89 — Arc 10.0 km
6 May 1968 — Ref Pt 161°
0628-0703 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 310	360	437	490	547	610	VIC
0	137.6	0						0
107	138.2	0						0
215	138.8	2						3
322	139.4	3						4
429	140.0	5						6
536	140.7	5						7
644	141.3	6						8
751	141.9	7						9
858	142.5	7						9
966	143.1	7	0					10
1073	143.7	7	2					13
1180	144.4	6	6					19
1287	145.0	5	8					19
1395	145.6	4	8					19
1502	146.2	4	7					18
1609	146.8	4	7					17
1717	147.4	5	6				0	18
1824	148.0	5	7	0			2	23
1931	148.7	6	7	1			2	23
2039	149.3	5	6	2			2	25
2146	149.9	7	7	3			4	32
2253	150.5	8	8	3			2	31
2360	151.1	7	9	6			3	39
2468	151.7	9	10	3			2	38
2575	152.3	8	9	4			3	39
2682	153.0	10	8	4			*5	42
2790	153.6	11	10	3			2	41
2897	154.2	12	13	1			0	39
3004	154.8	*11	11	2				36
3111	155.4	10	15	3				42
3219	156.0	9	13	6				44
3326	156.6	6	12	11				47

Keystone #89 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 310	360	437	490	547	610	VIC
3433	157.3	3	11	11				41
3541	157.9	2	11	14		0		46
3648	158.5	2	14	15		5		60
3755	159.1	3	14	15		15		75
3862	159.7	4	15	17		18		90
3970	160.3	6	18	17		9		83
4077	160.9	5	16	16		13		83
4184	161.6	4	18	16		17		90
4292	162.2	1	15	19	0	22		94
4399	162.8	1	16	19	4	26		109
4506	163.4	2	21	19	7	36		140
4613	164.0	1	19	16	14	32		133
4721	164.6	1	10	18	17	*46		148
4828	165.3	0	9	17	18	44		143
4935	165.9	1	9	15	43	41		171
5043	166.5	2	7	21	55	44		199
5150	167.1	2	10	11	40	31		148
5257	167.7	2	12	17	35	8		119
5364	168.3	2	11	19	53	0		132
5472	168.9	1	18	25	38			131
5579	169.6	0	24	26	40			144
5686	170.2		26	33	54			180
5794	170.8		33	39	47			192
5901	171.4		33	49	67			239
6008	172.0		36	64	*84			294
6115	172.6		42	*63	64			276
6223	173.2		*40	58	34			219
6330	173.9		31	56	14			186
6437	174.5		32	28	0			103
6545	175.1		37	19				96
6652	175.7		32	15				80
6759	176.3		18	15				57
6867	176.9		13	16				48
6974	177.5		9	21				53
7081	178.2		7	16				40
7188	178.8		6	15				36
7296	179.4		7	15				37
7403	180.0		7	16				41
7510	180.6		9	15				41
7618	181.2		11	11				37
7725	181.8		9	9				32
7832	182.5		8	7				25
7939	183.1		10	9				32
8047	183.7		9	7				27
8154	184.3		6	9				26
8261	184.9		0	10				18
8369	185.5			12				21
8476	186.2			11				19
8583	186.8			10				17
8690	187.4			8				14
8798	188.0			9				16
8905	188.6			11				18
9012	189.2			8				14
9120	189.8			5				9
9227	190.5			0				0
CIC		703	2734	3184	2083	1168	74	
Peak		12	50	73	88	46	5	
Pass		6	5	1	2	3	4	

Keystone #90 — Arc 4.0 km
7 May 1968 — Ref Pt 223°
0553-0607 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 250	307	355	444	500	554	618	VIC
0	212.2					0			0
107	213.7		0			5			7
215	215.3	0	12	0	0	17			42
322	216.8	0	66	107	13	*85			439
429	218.3	0	*163	152	54	91		0	746
536	219.9	0	88	*270	*150	102		7	1069
644	221.4	0	4	199	133	90	0	*24	799
751	222.9	0	0	16	59	25	7	6	202
858	224.5	0		8	7	0	*99	6	195
966	226.0	0		14	2		9	0	44
1073	227.6			0	0		6		9
1180	229.1						5		7
1287	230.6						0		0
CIC		0	949	2196	1197	1191	360	122	
Peak		0	180	289	156	118	106	30	
Pass		7	6	5	1	2	3	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #91 — Arc 10.0 km — Ref Pt 217° — SO_2 in pphm
7 May 1968
0610-0624 EST

Cum y (m)	Dir (°)	Traverse Height (m) 240	266	300	360	422	483	548	VIC
0	218.8	0		0		0			0
107	219.4	0		5	0	45			80
215	220.0	0	0	25	46	40			174
322	220.6	0	5	*46	117	*80			382
429	221.3	0	9	24	149	97			440
536	221.9	0	*20	20	*177	76	0		453
644	222.5	0	15	7	143	43	13		346
751	223.1	0	12	0	144	28	10		307
858	223.7	0	6		85	8	*39		223
966	224.3	0	0		43	0	22		107
1073	224.9	0			19		30	0	81
1180	225.6				0		37	6	72
1287	226.2						32	*11	74
1395	226.8						10	8	32
1502	227.4						0	9	16
1609	228.0							6	10
1717	228.6							5	8
1824	229.2							0	0
CIC		0	189	363	2643	1194	555	129	
Peak		0	24	49	166	112	42	13	
Pass		6	7	5	4	1	2	3	

Keystone #92 — Arc 16.0 km — Ref Pt 227° — SO_2 in pphm
7 May 1968
0630-0645 EST

Cum y (m)	Dir (°)	Traverse Height (m) 300	363	440	500	542	VIC
0	224.3		0				0
107	224.6		15				29
215	225.0		51	0			94
322	225.4		102	4			198
429	225.8	0	75	10			159
536	226.2	*4	102	19			232
644	226.6	4	102	41			271
751	226.9	4	*102	84			351
858	227.3	3	70	*123			361
966	227.7	2	51	114			307
1073	228.1	0	91	91		0	336
1180	228.5		49	87		0	252
1287	228.9		9	115		0	227
1395	229.3		0	107		0	196
1502	229.6			82	0	0	150
1609	230.0			72	6	0	141
1717	230.4			68	14	0	144
1824	230.8			68	12	0	141
1931	231.2			44	*32	0	124
2039	231.6			31	25	0	92
2146	231.9			17	17	0	53
2253	232.3			7	10	0	27
2360	232.7			3	9	0	17
2468	233.1			0	6	0	8
2575	233.5				0	0	0
CIC		45	2344	3408	374	0	
Peak		5	111	124	34	0	
Pass		5	4	1	2	3	

Keystone #93 — Arc 4.0 km — Ref Pt 251° — SO_2 in pphm
7 May 1968
0855-0925 EST

Cum y (m)	Dir (°)	Traverse Height (m) 445	508	570	637	700	764	821	877	978	1028	VIC
0	232.5		0									0
107	234.0		2	0								3
215	235.6		3	0			0					5
322	237.1	0	*3	0			4					12
429	238.7	1	3	0			1					8
536	240.2	*11	0	0	0		17				0	46
644	241.7	2		0	14		40	0			3	98
751	243.3	0		0	*15	0	42	5	0		2	105
858	244.8			0	0	4	*57	10	8		4	136
966	246.3			0		6	47	1	*59		12	226
1073	247.9			0		11	15	58	45		8	236
1180	249.4			0		10	2	*70	31		10	204
1287	250.9					21	0	32	9		10	116
1395	252.5					37		23	28		8	166
1502	254.0					*49		21	39	0	13	213
1609	255.6					25		20	27	3	16	155
1717	257.1					3		36	16	5	28	138
1824	258.6					29		51	36	2	13	225
1931	260.2					0		49	34	5	0	156
2039	261.7							52	14	4	1	116
2146	263.2							61	27	1	2	152
2253	264.8							54	21	4	13	150
2360	266.3							52	8	3	*39	153
2468	267.9							0	13	0	15	47
2575	269.4								7	0	2	17
2682	270.9								0	2	0	4
2790	272.5									5	0	10
2897	274.0									15	0	31
3004	275.5									*30	1	61
3111	277.1									24	9	61
3219	278.6									24	6	56
3326	280.1									33	0	67
3433	281.7									33		66
3541	283.2									21		43
3648	284.8									16		32
3755	286.3									17		34
3862	287.8									14		28
3970	289.4									3		7
4077	290.9									0		0
CIC		40	30	0	85	560	645	1702	1204	757	612	
Peak		11	4	0	27	51	77	81	67	44	41	
Pass		1	2	3	4	5	6	7	8	9	10	

Keystone #94 — Arc 4.0 km — Ref Pt 356° — SO_2 in pphm
8 May 1968
0600-0611 EST

Cum y (m)	Dir (°)	Traverse Height (m) 235	314	364	430	503	555	VIC
0	334.4			0				0
107	336.0			4				5
215	337.5	0		4				5
322	339.0	0		10				16
429	340.6	0		19				29
536	342.1	0	0	25				39
644	343.7	0	12	80				143
751	345.2	0	*12	88				156
858	346.7	0	4	96				154
966	348.3	0	0	*133	0			206
1073	349.8	0		107	7		0	179
1180	351.3	0		111	107	0	0	371
1287	352.9			0	118	14	0	242
1395	354.4				121	24	0	266
1502	355.9				*106	23	0	236
1609	357.5				60	21	0	146
1717	359.0				10	*58	0	116
1824	000.6				0	40	0	67
1931	002.1					0	0	0
CIC		0	76	1935	1518	516	0	
Peak		0	16	140	157	88	0	
Pass		6	5	4	1	2	3	

Table 3.(continued). PLUME CROSS SECTIONS

Keystone #95 — Arc 10.0 km
8 May 1968 — Ref Pt 356°
0615-0631 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 305	355	445	481	542	611	VIC
0	343.7		0					0
107	344.3	0	7					13
215	344.9	0	15					28
322	345.5	0	12					22
429	346.1	0	10					19
536	346.7	0	23					43
644	347.3	0	24					45
751	348.0	0	19					35
858	348.6	0	23					43
966	349.2	0	16					30
1073	349.8	0	*32					60
1180	350.4	0	7					13
1287	351.0	0	0					0
1395	351.6	0		0				0
1502	352.3			12				19
1609	352.9			25				43
1717	353.5			45				76
1824	354.1			44				74
1931	354.7			50				83
2039	355.3			62				105
2146	355.9			83				140
2253	356.6			104				175
2360	357.2			111				186
2468	357.8			97				163
2575	358.4			126				212
2682	359.0			114				192
2790	359.6			127	0			214
2897	000.3			*132	16			242
3004	000.9			50	20			109
3111	001.5			10	69			107
3219	002.1			0	*152			197
3326	002.7				104			135
3433	003.3				53			69
3541	003.9				0			0
3648	004.6					0	0	0
3755	005.2					8	0	14
3862	005.8					5	0	8
3970	006.4					5	0	8
4077	007.0					20	0	34
4184	007.6					38	0	66
4292	008.2					*54	0	94
4399	008.9					14	0	24
4506	009.5					0	0	0
CIC		0	539	3414	1187	410	0	
Peak		0	34	139	158	59	0	
Pass		6	5	1	2	3	4	

Keystone #96 — Arc 16.0 km
8 May 1968 — Ref Pt 358°
0645-0704 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 299	355	418	475	555	VIC
0	347.6	0	0				0
107	348.0	1	3				8
215	348.3	2	4				9
322	348.7	2	5				11
429	349.1	2	6				12
536	349.5	2	5				11
644	349.9	1	4				8
751	350.3	2	4				9
858	350.6	*3	3				9
966	351.0	3	4				11
1073	351.4	2	6				13
1180	351.8	3	5				12
1287	352.2	1	7				13
1395	352.6	1	7				11
1502	353.0	1	7				12
1609	353.3	2	9				17
1717	353.7	2	7				18
1824	354.1	1	9				16
1931	354.5	2	7				13
2039	354.9	0	*13				22
2146	355.3		12	0			19
2253	355.6		10	3			22
2360	356.0		2	4			10
2468	356.4		2	4			9
2575	356.8		1	2			5
2682	357.2		2	2			5
2790	35716		1	3			6
2897	357.9		1	9			17
3004	358.3		0	17			27
3111	358.7		0	11			17
3219	359.1		1	30			48
3326	359.5		1	27			44
3433	359.9		3	27			48
3541	000.3		1	33			54
3648	000.6		0	47			75
3755	001.0			72			116
3862	001.4			72			115
3970	001.8			*77			124
4077	002.2			75			121
4184	002.6			72			115
4294	002.9			40			65
4399	003.3			2			3
4506	003.7			1	0	0	2
4613	004.1			3	3	0	10
4721	004.5			0	1	0	2
4828	004.9				1	0	2
4935	005.2				1	0	2
5043	005.6				2	0	3
5150	006.0				1	0	2
5257	006.4				2	0	4
5364	006.8				2	0	3
5472	007.2				2	0	4
5579	007.6				2	0	4
5686	007.9				5	0	9
5794	008.3				11	0	21
5901	008.7				16	0	30
6008	009.1				21	0	39
6115	009.5				34	0	61
6223	009.9				*51	0	94
6330	010.2				41	0	75
6437	010.6				36	0	66
6545	011.0				34	0	61
6652	011.4				23	0	43
6759	011.8				20	0	36
6867	012.2				36	0	66
6974	012.5				13	0	23
7081	012.9				6	0	11
7188	013.3				0	0	0
CIC		84	438	1807	1041	0	
Peak		4	16	84	52	0	
Pass		5	4	1	2	3	

Keystone #97 — Arc 4.0 km
9 May 1968 — Ref Pt 015°
0553-0604 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 262	317	386	464	495	VIC
0	348.8	0					0
107	350.4	6	0				8
215	351.9	7	8				24
322	353.4	9	13				35
429	355.0	8	23				50
536	356.5	16	20				56
644	358.0	16	21	0			58
751	359.6	15	32	7			89
858	001.1	*20	27	17			107
966	002.7	0	*38	7			77
1073	004.2		34	9			74
1180	005.7		6	14			37
1287	007.3		0	14			27
1395	008.8			20	0	0	39
1502	010.3			23	13	0	64
1609	011.9			*23	24	0	81
1717	013.4			19	32	0	83
1824	014.9			7	37	0	67
1931	016.5			0	*57	0	82
2039	018.0				34	0	49
2146	019.6				27	0	39
2253	021.1				13	0	18
2360	022.6				0	0	0
CIC		277	631	456	674	0	
Peak		24	44	36	65	0	
Pass		5	4	3	1	2	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #98 — Arc 10.0 km
9 May 1968 — Ref Pt 021°
0616-0635 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 102	250	318	383	447	487	565	VIC
0	002.5	0	0						0
107	003.1	0	4						11
215	003.7	0	4		0				12
322	004.4	0	4	0	8				26
429	005.0	0	4	2	5				25
536	005.6	0	6	4	6				34
644	006.2	0	8	4	8				43
751	006.8	0	10	7	11				60
858	007.4	0	*12	7	17				77
966	008.0	0	11	9	17				77
1073	008.7	0	7	13	27				90
1180	009.3	0	11	17	31				116
1287	009.9	0	3	23	12				69
1395	010.5		3	29	13				81
1502	011.1		0	29	35				111
1609	011.7			34	*49				145
1717	012.3			17	34				88
1824	013.0			22	36				101
1931	013.6			20	42				107
2039	014.2			8	36				76
2146	014.8			26	27				93
2253	015.4			*30	33	0			110
2360	016.0			39	20	2			105
2468	016.6			7	6	13			41
2575	017.3			0	1	18	0		25
2682	017.9				5	18	4	0	41
2790	018.5				0	20	10	0	43
2897	019.1					21	12	0	47
3004	019.7					10	23	0	50
3111	020.3					17	8	0	36
3219	020.9					*29	5	0	48
3326	021.6					22	14	0	53
3433	022.2					13	*32	0	70
3541	022.8					8	24	0	50
3648	023.4					12	10	0	33
3755	024.0					4	4	0	12
3862	024.6					0	1	0	2
3970	025.3						1	0	2
4077	025.9						0	0	0
CIC		0	247	993	1368	594	425	0	
Peak		0	13	57	50	30	36	0	
Pass		7	6	6	4	1	2	3	

Keystone #99 — Arc 16.0 km
9 May 1968 — Ref Pt 013°
0642-0706 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 253	315	384	442	495	557	VIC
0	009.5		0					0
107	009.9	0	3					4
215	010.3	2	1					5
322	010.6	2	1					5
429	011.0	3	1					7
536	011.4	3	2					8
644	011.8	3	2					7
751	012.2	3	2	0				9
858	012.6	3	2	1				9
966	012.9	3	3	1				11
1073	013.3	3	2	1				9
1180	013.7	3	2	2				10
1287	014.1	5	3	2				16
1395	014.5	4	4	2				17
1502	014.9	4	4	2				18
1609	015.3	3	6	2				18
1717	015.6	4	5	3				21
1824	016.0	5	5	2				20
1931	016.4	5	6	1				20
2039	016.8	7	6	1				23
2146	017.2	*8	7	0	0			25
2253	017.6	7	6	2	3			31
2360	017.9	5	4	2	4			25
2468	018.3	6	6	1	4	0		28
2575	018.7	3	7	1	7	2		31
2682	019.1	3	6	1	5	1		27
2790	019.5	4	8	1	8	2		37
2897	019.9	3	12	2	7	3		43
3004	020.2	3	11	3	8	2		44
3111	020.6	3	11	2	7	1		40
3219	021.0	3	*11	4	13	2		54
3326	021.4	1	9	4	13	1		43
3433	021.8	0	5	5	14	2		40
3541	022.2		6	6	15	3		48
3648	022.6		5	*8	13	1		44
3755	022.9		3	7	14	2		39
3862	023.3		3	6	16	3		43
3970	023.7		2	2	*21	1		40
4077	024.1		0	1	18	1		30
4184	024.5			0	16	5		31
4292	024.9				13	7		30
4399	025.2				11	6		25
4506	025.6				6	7		19
4613	026.0				6	5		17
4721	026.4				11	7		26
4828	026.8				3	5		13
4935	027.2				0	18		28
5043	027.5					*16		25
5150	027.9					14		21
5257	028.3					5		8
5364	028.7					7	0	11
5472	029.1					9	1	14
5579	029.5					9	*6	23
5686	029.9					11	4	24
5794	030.2					5	0	8
5901	030.6					6		10
6008	031.0					15		23
6115	031.4					5		8
6223	031.8					6		9
6330	032.2					4		6
6437	032.5					2		3
6545	032.9					2		3
6652	033.3					0		0
CIC		317	517	214	730	578	30	
Peak		8	14	9	23	21	7	
Pass		6	5	4	1	2	3	

Keystone #100 — Arc 4.0 km
9 May 1968 — Ref Pt 022°
0822-0838 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 93	191	270	325	383	466	510	567	VIC
0	009.7		0							0
107	011.2		2							3
215	012.7	0	2	0						3
322	014.3	2	3	5						23
429	015.8	4	3	5	0					26
536	017.3	*4	4	4	9					40
644	018.9	5	2	10	19	0	0			66
751	020.4	4	*4	11	21	3	2			82
858	021.9	2	4	10	19	23	4			110
966	023.5	0	0	*18	10	24	10			110
1073	025.0			14	*19	33	38			180
1180	026.6			12	18	31	*53	0		196
1287	028.1			6	4	25	46	5	0	149
1395	029.6			0	4	28	35	12	2	139
1502	031.2				0	37	34	65	*10	230
1609	032.7					*49	3	70	6	200
1717	034.2					40	0	*41	0	129
1824	035.8					0		13		17
1931	037.3							0		0
CIC		58	67	278	354	832	646	587	52	
Peak		6	6	20	33	55	56	81	14	
Pass		8	7	6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #101 — Arc 10.0 km
9 May 1968 — Ref Pt 032°
0849-0903 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 104	257	316	384	404	515	VIC
0	016.6		0					0
107	017.2		1					3
215	017.8		3					9
322	018.4		4					13
429	019.0	0	5	0				14
536	019.7	2	*5	3				27
644	020.3	2	4	5				27
751	020.9	2	3	6	0			25
858	021.5	*2	4	7	2			31
966	022.1	2	1	8	3			28
1073	022.7	1	2	8	5			29
1180	023.3	1	1	8	6			27
1287	024.0	1	1	6	6			24
1395	024.6	1	0	9	6		0	26
1502	025.2	1	1	9	6		4	40
1609	025.8	0	1	*11	4	0	*13	64
1717	026.4		1	6	4	5	9	52
1824	027.0		2	11	4	8	3	52
1931	027.6		1	7	6	4	4	37
2039	028.3		4	6	4	12	1	51
2146	028.9		2	7	*6	*13	1	50
2253	029.5		1	7	5	11	2	46
2360	030.1		0	0	4	11	4	34
2468	030.7		3		7	8	3	37
2575	031.3		3		3	9	2	31
2682	031.9		2		1	12	0	27
2790	032.6		0		1	14		26
2897	033.2		0		3	6		14
3004	033.8				2	6		13
3111	034.4				0	5		9
3219	035.0					3		6
3326	035.6					4		6
3433	036.3					0		0
CIC		36	159	359	244	373	122	
Peak		3	6	14	8	18	13	
Pass		6	5	4	3	1	2	

Keystone #102 — Arc 4.0 km
10 May 1968 — Ref Pt 098°
0641-0657 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 357	444	500	543	627	676	741	VIC
0	093.3						0	0	0
107	094.9						8	0	12
215	096.4					0	34	0	51
322	097.9	0		0		1	20	0	32
429	099.5	10		*195	0	105	*80	0	590
536	101.0	15	0	212	10	117	49	0	614
644	102.6	*15	13	173	34	142	6	0	606
751	104.1	0	49	80	118	*145	29	0	700
858	105.6		*83	12	136	87	17	0	585
966	107.2		19	0	*186	38	0	0	418
1073	108.7		21		38	10			123
1180	110.2		0		0	0			0
CIC		115	526	1925	1495	1849	691	0	
Peak		22	89	245	192	185	85	0	
Pass		7	1	2	3	4	5	6	

Keystone #103 — Arc 10.0 km
10 May 1968 — Ref Pt 097°
0704-0718 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 382	427	484	549	610	658	VIC
0	090.8					0		0
107	091.4					25		37
215	092.0					88		128
322	092.6					106		155
429	093.3				0	125		182
536	093.9				9	*126		199
644	094.5	0			69	32		164
751	095.1	0	0		104	34		224
858	095.7	0	*37	0	97	8		225
966	096.3	0	30	23	107	13		278
1073	096.9	0	13	*52	137	29		375
1180	097.6	0	22	7	124	30		293
1287	098.2	0	15	5	*142	32		314
1395	098.8	0	15	7	98	13		215
1502	099.4	0	7	17	92	10		208
1609	100.0	0	7	8	74	7		157
1717	100.6	0	7	6	75	29	0	187
1824	101.3	0	0	0	46	30	*9	133
1931	101.9				0	27	7	48
2039	102.5					16	7	32
2146	103.1					0	0	0
CIC		0	437	357	3368	2236	66	
Peak		0	78	57	158	141	13	
Pass		6	5	1	2	3	4	

Keystone #104 — Arc 16.0 km
10 May 1968 — Ref Pt 097°
0734-0816 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 365	412	496	548	613	670	724	787	860	VIC
0	091.2				0						0
107	091.6				12						19
215	092.0			0	56						88
322	092.3			17	43						99
429	092.7			63	25						154
536	093.1			43	52	0					159
644	093.5			15	76	47					223
751	093.9			57	26	5					153
858	094.3			*80	*96	18					324
966	094.6			80	68	*34					306
1073	095.0			55	1	10					116
1180	095.4			25	8	2					61
1287	095.8			16	0	2					31
1395	096.2			19		1					36
1502	096.6			20		1	0				37
1609	096.9			11		28	5				73
1717	097.3			0		15	21				55
1824	097.7					3	30				50
1931	098.1					1	24				37
2039	098.5					1	31				47
2146	098.9					4	13				25
2253	099.3					0	21				31
2360	099.6					0	45				67
2468	100.0						*45				67
2575	100.4						18				26
2682	100.8		0				0	0			0
2790	101.2	0	4					2	0		10
2897	101.6	4	10					9	5		45
3004	101.9	*8	6					14	3		48
3111	102.3	7	18					*11	2		92
3219	102.7	3	*24					32	3		101
3326	103.1	6	17					17	5		74
3433	103.5	6	4					20	17		79
3541	103.9	6	4					21	*24		91
3648	104.2	3	3					5	17		48
3755	104.6	4	1					5	14	0	38
3862	105.0	7	0					0	14	11	54
3970	105.4	7							11	2	33
4077	105.8	4							3	10	29
4184	106.2	0							5	6	22
4292	106.6								12	1	24
4399	106.9								7	1	14
4506	107.3								0	1	2
4613	107.7									12	23
4721	108.1									9	18
4828	108.5									19	37
4935	108.9									19	37
5043	109.2									21	40
5150	109.6									16	30
5257	110.0									28	54
5364	110.4									*22	42
5472	110.8									10	19
5579	111.2									7	13
5686	111.5									11	22
5794	111.9									3	6
5901	112.3									0	0
CIC		183	264	1435	1323	489	722	446	406	592	
Peak		10	25	105	96	51	54	38	25	32	
Pass		9	8	1	2	3	4	5	6	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #105 — Arc 4.0 km
11 May 1968 — Ref Pt 355°
0605-0621 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 290	342	406	457	522	582	642	VIC
0	355.0					0			0
107	355.5	0	0			9			15
215	358.0	10	4			14			43
322	359.6	13	4			*35			81
429	001.1	17	4	0		38			93
536	002.6	*13	19	8		28			105
644	004.2	7	10	15	0	10		0	66
751	005.7	0	13	69	10	4	0	5	156
858	007.2		17	74	24	0	12	*9	211
966	008.8		22	*79	46		*32	0	278
1073	010.3		*31	4	*64		12		171
1180	011.9		30	0	53		13		149
1287	013.4		12		37		8		88
1395	014.9		0		12		9		33
1502	016.5				0		9		15
1609	018.0						0		0
CIC		172	470	712	705	394	271	39	
Peak		23	59	82	82	58	35	16	
Pass		7	6	1	2	3	4	5	

Keystone #106 — Arc 10.0 km
11 May 1968 — Ref Pt 011°
0627-0654 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 120	297	357	406	471	522	588	642	VIC
0	353.7	0	0							0
107	354.4	0	2							5
215	355.0	0	3							8
322	355.6	0	2							6
429	356.2	0	6							18
536	356.8	0	1							3
644	357.4	0	4							12
751	358.0	0	5	0						16
858	358.7	0	3	3						15
966	359.3	0	2	6						16
1073	359.9	0	2	9						19
1180	000.5	0	1	13						21
1287	001.1	0	1	8						16
1395	001.7	0	1	15						25
1502	002.3	0	3	*15						30
1609	003.0	0	5	13						36
1717	003.6	0	5	14	0	0				36
1824	004.2	0	*6	10	6	5				48
1931	004.8	0	3	8	3	*12				45
2039	005.4	0	4	4	5	9				39
2146	006.0		2	2	8	4				26
2253	006.6		0	0	7	12				28
2360	007.3				4	10				21
2468	007.9				2	12				21
2575	008.5				2	10				19
2682	009.1				2	7				14
2790	009.7				2	7				13
2897	010.3				2	6				12
3004	010.9				*14	4	0			28
3111	011.6				10	8	1			29
3219	012.2				7	5	8			32
3326	012.8				11	4	7			34
3433	013.4				7	2	6	0		22
3541	014.0				3	1	5	3		19
3648	014.6				0	1	7	6		23
3755	015.3					1	*8	12		34
3862	015.9					0	7	7		22
3970	016.5					0	6	9		24
4077	017.1					1	6	6		21
4184	017.7					1	8	11		31
4292	018.3					0	6	9		23
4399	018.9						6	10		25
4506	019.6						4	11		24
4613	020.2						6	16	0	36
4721	020.8						6	*21	1	44
4828	021.4						4	17	0	33
4935	022.0						2	5	*1	12
5043	022.6						0	4	0	7
5150	023.2							4	1	8
5257	023.9							1	0	2
5364	024.5							2		2
5472	025.1							2		3
5579	025.7							4		6
5686	026.3							6		9
5794	025.9							0		0

Keystone #106 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 120	297	357	406	471	522	588	642	VIC
CIC		0	168	349	266	351	299	470	7	
Peak		0	8	17	16	14	10	22	2	
Pass		8	7	6	1	2	3	4	5	

Keystone #107 — Arc 16.0 km
11 May 1968 — Ref Pt 017°
0658-0730 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 222	282	354	406	462	542	642	VIC
0	359.7	0	0						0
107	000.0	0	0						0
215	000.4	0	1						2
322	000.8	0	2						4
429	001.2	0	*3						6
536	001.6	0	2						3
644	002.0	0	1						2
751	002.4	0	1						2
858	002.7	0	2						3
966	003.1	0	2						3
1073	003.5	0	3						4
1180	003.9	0	1						2
1287	004.3	0	0						0
1395	004.7			0					0
1502	005.0			1					2
1609	005.4			2					4
1717	005.8			1					2
1824	006.2			1					2
1931	006.6			2					2
2039	007.0			5					8
2146	007.3			4					7
2253	007.7			6					9
2360	008.1			4					7
2468	008.5			*9					15
2575	008.9			7	0				12
2682	009.3			8	2	0			16
2790	009.7			7	2	3			18
2897	010.0			5	2	5			20
3004	010.4			2	2	10			24
3111	010.8			0	1	8			16
3219	011.2				3	8			19
3326	011.6				12	8			31
3433	012.0				11	9			32
3541	012.3				14	*12			42
3648	012.7				16	10			41
3755	013.1				14	9			37
3862	013.5				*16	7			36
3970	013.9				3	8			19
4077	014.3				2	7			16
4184	014.6				0	7			13
4292	015.0					5			8
4399	015.4					5			10
4506	015.8					3			4
4613	016.2					1			2
4731	016.6					1			2
4828	016.9					1			1
4935	017.3					1			1
5043	017.7					2			4
5150	018.1					2			3
5257	018.5					2			4
5364	018.9					1			1
5472	019.3					0			0
5579	019.6								0
5686	020.0								0
5794	020.4								0
5901	020.8								0
6008	021.2						0		0
6115	021.6						3		7
6223	021.9						3		8
6330	022.3						3		8
6437	022.7						5		12
6545	023.1						6		14
6652	023.5						6	0	14
6759	023.9						6	1	15
6867	024.2						6	1	19
6974	024.6						5	3	19
7081	025.0						5	3	20
7188	025.4						*5	*4	24
7296	025.8						5	3	22
7403	026.2						3	2	14
7510	026.6						2	1	6
7618	026.9						1	0	3

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #107 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 222	282	354	406	462	542	642	VIC
7725	027.3						1		3
7832	027.7						1		3
7939	028.1						1		3
8047	028.5						2		4
8154	028.9						3		6
8261	029.2						4		9
8369	029.6						4		9
8476	030.0						3		6
8583	030.4						1		2
8690	030.8						0		0
CIC		0	50	183	281	380	242	51	
Peak		0	6	10	19	13	9	5	
Pass		7	6	5	1	2	3	4	

Keystone #110 — Arc 4.0 km; 23 May 1968; Ref Pt 014°; 0553-0615 EST; SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 434	476	546	599	664	724	782	841	912	VIC
0	350.9								0	0	0
107	352.4								9	0	16
215	354.0								*88	0	152
322	355.5								2	0	4
429	357.0								0	0	0
536	358.6									0	0
644	000.1									0	0
751	001.7						0	0		0	0
858	003.2		0				7	7		0	22
966	004.7		*57		0		9	5		0	22
1073	006.3		51		12		*21	4		0	123
1180	007.8		23		42		2	8		0	111
1287	009.3	0	14		*49		0	12			118
1395	010.9	54	0		0	0		*97			249
1502	012.4	62		0		8		27			102
1609	013.9	*33		24		*47		0			83
1717	015.5	9		14		45					157
1824	017.0	0		*51		9					108
1931	018.6			0		0					99
											0
CIC		456	413	255	291	314	112	453	284	0	
Peak		90	70	56	61	80	47	103	89	0	
Pass		1	2	3	4	5	6	7	8	9	

Keystone #111 — Arc 10.0 km; 23 May 1968; Ref Pt 006°; 0627-0651 EST; SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 418	474	540	664	717	784	842	VIC
0	355.5						0		0
107	356.1						5	0	8
215	356.7						*10	0	17
322	357.3					0	10	0	17
429	358.0					8	0	0	11
536	358.6					10		0	14
644	399.2		0			*31		0	42
751	359.8		15			19		0	49
858	000.4		15			32		0	68
966	001.0		13			28		0	58
1073	001.6		20			12		0	47
1180	002.3	0	21			16		0	56
1287	002.9	4	19			20		0	62
1395	003.5	*14	*18			5		0	57
1502	004.1	7	21			5		0	50
1609	004.7	0	20			15			52
1717	005.3		6			16			31
1824	005.9		0		0	12			15
1931	006.6				4	13			25
2039	007.2			0	*12	14			46
2146	007.8			7	7	12			49
2253	008.4			17	5	0			85
2360	009.0			19	4				55
2468	009.6			*18	4				55
2575	010.3			8	2				26
2682	010.9			0	0				0
CIC		69	477	198	102	762	72	0	
Peak		15	28	21	12	42	15	0	
Pass		7	6	1	2	3	5	4	

Keystone #108 — Arc 4.0 km; 21 May 1968; Ref Pt 360° (arbitrary); 0634-0645 EST; SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 172	252	290	332	VIC
0	341.5	0			0	0
107	343.0	0			14	16
215	344.6	0	0		45	50
322	346.1	0	2		*60	70
429	347.7	0	4	0	14	21
536	349.2	0	*6	1	0	11
644	350.7	0	1	7		9
751	352.3	0	0	*8		8
858	353.8	0		6		6
966	355.3			2		2
1073	356.9			0		0
CIC		0	35	64	380	
Peak		0	9	12	66	
Pass		2	1	3	4	

Keystone #109 — Arc 10.0 km; 21 May 1968; Ref Pt 360° (arbitrary); 0656-0705 EST; SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 245	294	335	VIC
0	356.3		0		0
107	356.9		3		4
215	357.5		9		10
322	358.1		*12		14
429	358.7		10		12
536	359.3		4		4
644	359.9		3	0	3
751	000.6		4	6	11
858	001.2	0	5	3	9
966	001.8	2	4	2	9
1073	002.4	3	5	4	14
1180	002.0	2	8	8	22
1287	003.6	3	13	*10	31
1395	004.3	3	5	6	19
1502	004.9	*6	4	7	19
1609	005.5	4	4	6	16
1717	006.1	0	3	6	10
1824	006.7		2	5	8
1931	007.3		3	4	7
2039	007.9		2	0	2
2146	008.6		0		0
CIC		67	287	188	
Peak		7	19	12	
Pass		3	2	1	

Keystone #112 — Arc 4.0 km; 26 May 1968; Ref Pt 336°; 0545-0605 EST; SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 310	368	416	489	530	603	VIC
0	306.8	0						0
107	308.3	6						9
215	309.8	*7	0					11
322	311.4	5	14					27
429	312.9	5	28					46
536	314.4	4	45	0				69
644	316.0	4	98	4				149
751	317.5	5	94	38				191
858	319.0	0	*111	*112				308
966	320.6		54	61				160
1073	322.1		52	13				91
1180	323.7		35	27	0			85
1287	325.2		7	52	8		0	92
1395	326.7		16	113	17		0	202
1502	328.2		5	24	80		0	161
1609	329.8		0	0	*134	0	0	204
1717	331.3				75	61	0	224
1824	332.9				36	*17	0	102
1931	334.4				0	0	0	0
CIC		96	1600	1272	1004	251	0	
Peak		7	113	131	143	71	0	
Pass		6	5	1	2	3	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #113
26 May 1968
0612-0640 EST

Arc 10.0 km
Ref Pt 332°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 250	304	370	419	490	543	606	VIC
0	303.1	0	0						0
107	303.7	0	6						9
215	304.3	0	17						28
322	304.9	0	19						30
429	305.5	0	19						30
536	306.1	0	*36						58
644	306.7	0	41						65
751	307.4	0	21						33
858	308.0	0	23						37
966	308.6	0	15						24
1073	309.2	0	24						39
1180	309.8	0	30						48
1287	310.4	0	36						58
1395	311.0	0	35						56
1502	311.7	0	21						33
1609	312.3	0	22						35
1717	312.9	0	16						26
1824	313.5	0	22						35
1931	314.1	0	14						22
2039	314.7	0	9						15
2146	315.4	0	5						7
2253	316.0	0	6						9
2360	316.6	0	0	0					0
2468	317.2	0		8					12
2575	317.8	0		12					18
2682	318.4	0		10					16
2790	319.0	0		19					28
2897	319.7			19					28
3004	320.3			24					37
3111	320.9			34					51
3219	321.5			32					50
3326	322.1			39					60
3433	322.7			*30					46
3541	323.3			9	0				14
3648	324.0			5	17				35
3755	324.6			4	16				31
3862	325.2			1	7				13
3970	325.8			2	13				24
4077	326.4			0	17				28
4184	327.0				29				46
4292	327.6				38				61
4399	328.3				41				65
4506	328.9				*61				98
4613	329.5				58				93
4721	330.1				10				17
4828	330.7				6	0			9
4935	331.3				0	17			29
5043	331.9					*36		0	59
5150	332.6					24		0	40
5257	333.2					4	0	0	6
5364	333.8					0	5	0	7
5472	334.4						13	0	20
5579	335.0						7	0	11
5686	335.6						15	0	23
5794	336.3						2	0	4
5901	336.9						6	0	9
6008	337.5						16	0	25
6115	338.1						*21	0	32
6223	338.7						13	0	20
6330	339.3						7	0	11
6437	339.9						0	0	0
CIC		0	1250	709	897	231	298	0	
Peak		0	43	47	68	39	23	0	
Pass		7	6	5	1	2	3	4	

Keystone #114
26 May 1968
0650-0727 EST

Arc 16.0 km
Ref Pt 360° (arbitrary)
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 239	310	360	435	489	550	VIC
0	330.4	0						0
107	330.8	2						4
215	331.1	*0						0
322	331.5	0						0
429	331.9	0						0
536	332.3	0						0
644	332.7	0						0
751	333.1	2						4
858	333.4	2						3
966	333.8	0						0
1073	334.2	0						0
1180	334.6	0						0

Keystone #114 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 239	310	360	435	489	550	VIC
1287	335.0	0						0
1395	335.4	0	0					0
1502	335.7	0	3					4
1609	336.1	0	4					6
1717	336.5	0	3					5
1824	336.9	2	5					11
1931	337.3	2	3					7
2039	337.7	0	*9					15
2146	338.0	0	5					8
2253	338.4	0	2					4
2360	338.8	2	6					14
2468	339.2	0	2					2
2575	339.6		0					0
2682	340.0		2					2
2790	340.4		1					2
2897	340.7		1					2
3004	341.1		5					9
3111	341.5		2					4
3219	341.9		2					4
3326	342.3		1					2
3433	342.7		1					2
3541	343.0		3					4
3648	343.4		0					0
3755	343.8		0	0				0
3862	344.2		1	4				9
3970	344.6		2	10				20
4077	345.0		0	15				25
4184	345.3			18				29
4292	345.7			11				18
4399	346.1			16				26
4506	346.5			16				26
4613	346.9			*16				28
4721	347.3			15				24
4828	347.7			13				21
4935	348.0			13				22
5043	348.4			14				24
5150	348.8			14				23
5257	349.2			14				23
5364	349.6			16				26
5472	350.0			12				20
5579	350.3			12				20
5686	350.7			10				17
5794	351.1			4	0			7
5901	351.5			1	4			9
6008	351.9			0	12			20
6115	352.3				15			26
6223	352.6				11			20
6330	353.0				12			20
6437	353.4				23			39
6545	353.8				24	0		41
6652	354.2				14	1		25
6759	354.6				11	1		21
6867	355.0				12	1		22
6974	355.3				17	2		31
7081	355.7				20	4		40
7188	356.1				22	1		40
7296	356.5				*30	1		54
7403	356.9				21	2		38
7510	357.3				20	1		37
7618	357.6				21	2		38
7725	358.0				22	6		46
7832	358.4				16	10		43
7939	358.8				16	16		52
8047	359.2				13	22		55
8154	359.6				14	*23		60
8261	359.9				7	21		44
8369	000.3				5	21		40
8476	000.7				10	16		41
8583	001.1				4	15		30
8690	001.5				0	8		13
8798	001.9					4		6
8905	002.3					3		4
9012	002.6					0		0
9120	003.0							0
9227	003.4							0
9334	003.8						0	0
9441	004.2						2	4
9549	004.6						2	3
9656	004.9						*5	8
9763	005.3						1	2
9871	005.7						1	2
9978	006.1						3	4
10085	006.5						2	4
10192	006.9						3	6
10300	007.2						1	2
10407	007.6						0	0
CIC		30	182	693	1126	513	59	
Peak		4	11	24	32	26	5	
Pass		6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #115 — Arc 4.0 km — Ref Pt 279° — 27 May 1968 — 0615-0640 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 281	340	394	452	517	578	620	710	758	VIC
0	283.6	0		0							0
107	285.1	4	0	12			0				23
215	286.6	5	6	22	0	0	7	0			58
322	288.2	*5	*16	14	22	13	44	12			191
429	289.7	5	14	22	19	13	*51	23	0		223
536	291.2	0	5	25	6	25	39	9	*75		306
644	292.8		6	14	*15	28	9	23	14		197
751	294.3		6	46	23	*50	7	*60	0		315
858	295.9		6	*61	30	28	5	7			215
966	297.4		0	32	34	24	7	0		0	154
1073	298.9			0	20	6	2			*13	61
1180	300.5				7	0	2			0	15
1287	302.0				0		2				3
1395	303.5						2				3
1502	305.1						0				0
CIC		49	165	711	499	562	509	383	254	36	
Peak		10	39	67	50	55	79	83	84	15	
Pass		9	8	1	2	3	4	5	6	7	

Keystone #117 — Arc 4.0 km — Ref Pt 303° — 28 May 1968 — 0554-0614 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 241	295	356	422	471	542	592	643	712	VIC
0	295.3						0				0
107	296.8						2				4
215	298.3			0			4				7
322	299.9			3	0		4				11
429	301.4	0		8	6		6		0		31
536	303.0	0		13	12		6		3		55
644	304.5	0	0	*33	14	0	19		*17	0	136
751	306.0	0	2	14	16	1	29		4	*2	108
858	307.6	0	4	19	*42	1	*43	0	1	0	175
966	309.1	0	*9	24	34	19	35	2	1		198
1073	310.6	0	2	7	22	17	13	29	1		137
1180	312.2	0	2	0	0	34	2	14	2		82
1287	313.7		0			*35	0	*15	2		79
1395	315.2					22		12	4		58
1502	316.8					7		0	0		11
1609	318.3					6					10
1717	319.9					4					6
1824	321.4					0					0
CIC		0	53	346	417	416	465	208	96	6	
Peak		0	11	35	55	37	46	35	21	4	
Pass		9	8	7	1	2	3	4	5	6	

Keystone #116 — Arc 10.0 km — Ref Pt 291° — 27 May 1968 — 0652-0725 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 72	161	220	300	392	458	523	579	652	692	749	VIC
0	276.8	0											0
107	277.4	3											6
215	278.0	3	0										8
322	278.7	5	3				0						18
429	279.3	6	4				1						26
536	279.9	8	3		0		3						30
644	280.5	8	5		5	0	3						43
751	281.1	9	7		2	2	1						45
858	281.7	*9	8		3	2	1						51
966	282.3	10	10	0	4	1	2						57
1073	283.0	8	10	2	9	0	3						69
1180	283.6	8	*11	6	12	0	2						79
1287	284.2	7	10	5	15	1	5						89
1395	284.8	4	9	8	*15	1	4						84
1502	285.4	2	7	5	13	3	3						67
1609	286.0	0	7	6	5	5	1						47
1717	286.6		8	10	6	8	1						66
1824	287.3		5	8	2	7	*5						54
1931	287.9		4	*9	9	8	5						71
2039	288.5		3	9	10	4	4						60
2146	289.1		1	5	8	7	4						51
2253	289.7		0	8	3	7	3						43
2360	290.3			0	0	7	3		0				20
2468	290.9			0		10	2	0	7				37
2575	291.6					*11	2	3	6	0			42
2682	292.2					6	1	9	*10	3			52
2790	292.8					3	0	11	9	5	0		47
2897	293.4					2		*15	8	5	6	0	57
3004	294.0					3		12	6	2	*7	2	52
3111	294.6					2		7	4	3	2	2	33
3219	295.3					1		4	2	7	4	*3	30
3326	295.9					1		1	2	*12	5	2	35
3433	296.5					0		2	1	7	3	1	22
3541	297.1							0	2	7	5	1	23
3648	297.7								2	8	4	1	22
3755	298.3								2	11	5	1	26
3862	298.9								1	6	2	0	12
3970	299.6								2	2	0		6
4077	300.2								2	0			3
4184	300.8								5				8
4292	301.4								2				3
4399	302.0								0				0
CIC		257	326	230	340	290	166	183	204	226	120	34	
Peak		15	13	18	17	18	6	16	12	14	11	4	
Pass		11	10	9	8	1	2	3	4	5	6	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #118
28 May 1968
0618-0629 EST

Arc 10.0 km
Ref Pt 313°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 241	295	358	414	472	540	600	652	719	VIC
0	298.2			0							0
107	298.8		0	3							4
215	299.4		3	6							14
322	300.0		3	3							10
429	300.7		5	7							19
536	301.3		7	13		0					31
644	301.9		6	8		7					34
751	302.5		*10	8		11					47
858	303.1		6	6		16					48
966	303.7		5	9		16					48
1073	304.3		7	*22		16		0			72
1180	305.0		1	12		17		3			53
1287	305.6		0	3		26		4		0	55
1395	306.2			0		29	0	11		*2	69
1502	306.8					23	2	*12		0	59
1609	307.4				0	35	3	9			76
1717	308.0				3	33	1	8			75
1824	308.6	0			*14	*37	3	5			98
1931	309.3	0			15	25	5	4	0		80
2039	309.9	*2			10	8	8	3	1		50
2146	310.5	1			13	9	15	0	*11		80
2253	311.1	0			12	0	*18		9		63
2360	311.7				0		15		3		30
2468	312.3						9		0		15
2575	312.9						4				7
2682	313.6						3				5
2790	314.2						0				0
CIC		8	152	286	192	884	244	168	67	5	
Peak		2	11	26	16	38	21	13	22	5	
Pass		9	8	7	1	2	3	4	5	6	

Keystone #119
28 May 1968
0645-0705 EST

Arc 16.0 km
Ref Pt 303°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 286	365	422	476	535	599	652	VIC
0	299.1	0							0
107	299.5	*2	0						5
215	299.9	2	3						8
322	300.3	0	3						4
429	300.6		2						3
536	301.0		5						9
644	301.4		4						7
751	301.8		*10						17
858	302.2		7						13
966	302.6		7						12
1073	302.9		2						3
1180	303.3		0					0	0
1287	303.7							0	0
1395	304.1			0		0		0	0
1502	304.5			3	0	4		0	10
1609	304.9			5	5	13	0	0	38
1717	305.3			5	9	*16	1	0	48
1824	305.6			6	13	16	4	0	60
1931	306.0			8	14	17	4	0	65
2039	306.4			10	15	15	4	0	69
2146	306.8			10	18	15	6	0	77
2253	307.2			15	21	12	*14	0	95
2360	307.6			16	27	8	11	0	94
2468	307.0			*17	*30	2	8	0	86
2575	308.3			10	16	0	4	0	46
2682	308.7			3	13		4	0	30
2790	309.1			2	16		0	0	26
2897	309.5			0	13			0	20
3004	309.9				8			0	13
3111	310.2				3				4
3219	310.6				0				0
CIC		10	115	317	627	335	170	0	
Peak		6	10	21	33	19	15	0	
Pass		7	6	1	2	3	4	5	

Keystone #120
29 May 1968
0613-0634 EST

Arc 4.0 km
Ref Pt 097°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 326	379	441	504	557	612	678	747	VIC
0	090.8	0	0					0	0	0
107	092.3	0	6					16	0	37
215	093.9	0	5					23	0	50
322	095.4	0	4					*54	0	103
429	096.9	0	*4					44	0	85
536	098.5	0	6			0		23	0	50
644	100.0	0	4		0	14	0	11	0	46
751	101.6	0	4		5	28	10	0	0	69
858	103.1	0	7		8	35	29		0	120
966	104.6	0	5		16	34	79		0	210
1073	106.2	0	2		30	*49	*113		0	304
1180	107.7	0	0	0	*30	39	62			203
1287	109.2	0		8	28	37	22			145
1395	110.8			13	13	8	5			60
1502	112.3			13	0	0	9			35
1609	113.9			*22			0			36
1717	115.4			19						32
1824	116.9			15						26
1931	118.5			11						19
2039	120.0			5						9
2146	121.5			0						0
CIC		0	133	304	369	699	942	489	0	
Peak		0	7	24	43	51	114	55	0	
Pass		2	1	3	4	5	6	7	8	

Keystone #121
1 June 1968
0748-0812 EST

Arc 10.0 km
Ref Pt 108°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 470	522	582	645	700	762	VIC
0	089.5	0						0
107	090.1	1						1
215	090.7	4				0		6
322	091.4	*23				11		49
429	092.0	13				28		61
536	092.6	3				72		117
644	093.2	5				*84		138
751	093.8	0				82		128
858	094.4					63		98
966	095.0					51		79
1073	095.7					38		59
1180	096.3		0			13		20
1287	096.9		1			0		2
1395	097.5		4					6
1502	098.1		*11		0		0	17
1609	098.7		6		5		*6	28
1717	099.3		2		7		1	15
1824	100.0		4		10		1	23
1931	100.6		7		11		0	28
2039	101.2		9		6		1	24
2146	101.8		3		14		0	28
2253	102.4		0		26			41
2360	103.0				23			37
2468	103.6				16			25
2575	104.3				*34			54
2682	104.9				27			43
2790	105.5				24			37
2897	106.1				14			22
3004	106.7				16			25
3111	107.3			0	8			12
3219	107.9			4	3			11
3326	108.6			18	2			33
3433	109.2			77	0			126
3541	109.8			*99				162
3648	110.4			81				133
3755	111.0			67				111
2862	111.6			38				62
3970	112.3			24				39
4077	112.9			6				10
4184	113.5			0				0
CIC		139	139	1184	705	1261	22	
Peak		24	12	104	40	87	9	
Pass		4	3	2	1	5	6	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #122
1 June 1968
0824-0836 EST

Arc 16.0 km
Ref Pt 100°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 464	521	578	644	703	VIC
0	091.9				0		0
107	092.3				*14		24
215	092.7				28		47
322	093.0				17		28
429	093.4				17		29
536	093.8				22	0	37
644	094.2				13	*0	22
751	094.6				21	1	37
858	095.0		0		20	1	34
966	095.3	0	4		4	2	17
1073	095.7	0	2		4	0	10
1180	096.1	0	1		0		2
1287	096.5	0	5				8
1395	096.9	0	6				9
1502	097.3	0	14	0			21
1609	097.6	0	*29	8			58
1717	098.0	0	4	23			43
1824	098.4	0	0	47			77
1931	098.8	0		49			80
2039	099.2	0		*55			90
2146	099.6	0		61			101
2253	099.9	0		61			100
2360	100.3	0		47			78
2468	100.7			36			59
2575	101.1			49			80
2682	101.5			41			67
2790	101.9			1			1
2897	102.3			3			4
3004	102.6			15			25
3111	103.0			5			8
3219	103.4			0			0
CIC		0	186	1430	459	9	
Peak		0	30	70	31	3	
Pass		3	2	1	4	5	

Keystone #123
29 June 1968
0545-0558 EST

Arc 4.0 km
Ref Pt 049°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 305	376	425	484	534	VIC
0	016.3	0					0
134	018.3	2					4
263	020.2	5					9
402	022.1	*3					7
536	024.0	1					2
671	025.9	3					7
805	027.9	0					0
939	029.8				0	0	0
1073	031.7		0		13	6	26
1207	033.6		5		53	5	91
1341	035.6		7		*57	*14	112
1475	037.5		10	0	50	0	89
1609	039.4		14	37	16		99
1743	041.3		*22	23	0		68
1878	043.2		2	28			44
2012	045.2		0	*27			38
2146	047.1			13			18
2280	049.0			0			0
CIC		53	215	454	674	86	
Peak		10	48	50	80	18	
Pass		5	4	1	2	3	

Keystone #124
29 June 1968
0601-0618 EST

Arc 10.0 km
Ref Pt 036°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 304	368	414	474	544	VIC
0	029.1	0	0				0
134	029.9	0	2	0			3
268	030.6	0	3	1			6
402	031.4	0	7	1			12
536	032.2	0	8	1	0		14
671	032.9	0	8	1	5		22
805	033.7	0	11	2	2		23
939	034.5	0	10	3	2		22
1073	035.2	0	6	4	4		21
1207	036.0	0	11	7	9		42
1475	036.8	0	12	19	6		57
1609	038.3	0	7	29	*30		103
1743	039.1	0	15	*28	28		110
1878	039.8	0	*12	24	19		85
2012	040.6	0	5	20	20	0	69
2146	041.4	0	11	11	21	2	72
2280	042.1	0	7	5	25	2	65
2414	042.9	0	4	0	23	1	48
2548	043.7		3		20	1	41
2682	044.5		0		15	2	30
2816	045.2				5	5	18
2950	046.0				3	5	15
3085	046.8				0	4	7
3219	047.5					6	11
3353	048.3					2	4
3487	049.1					1	2
3621	049.8					2	4
3755	050.6					0	0
CIC		0	558	646	883	118	
Peak		0	22	31	35	7	
Pass		5	4	1	2	3	

Keystone #125
:9 June 1968
0633-0657 EST

Arc 16.0 km
Ref Pt 038°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 304	370	408	484	544	601	VIC
0	031.3	0						0
134	031.8	1						2
268	032.2	3						5
402	032.7	2	0					4
536	033.2	1	2					4
671	033.7	2	3					8
805	034.2	1	3					6
939	034.6	2	2					7
1073	035.1	3	3					9
1207	035.6	*4	3					13
1341	036.1	3	5	0				11
1475	036.6	2	4	2				12
1609	037.0	1	*6	4				16
1743	037.5	1	4	4				13
1878	038.0	0	4	4				12
2012	038.5	1	2	4				11
2146	039.0	0	2	8				15
2280	039.4		3	7				15
2414	039.9		3	6				13
2548	040.4		2	8				15
2682	040.9		3	12				22
2816	041.4		3	11				21
2950	041.8		3	14				25
3085	042.3		2	*14				24
3219	042.8		0	14				21
3353	043.3			7				11
3487	043.8			6	0			9
3621	044.2			6	2			13
3755	044.7			6	3		0	15
3889	045.2			7	3		0	16
4023	045.7			6	5		0	18
4157	046.2			6	6	0	0	20
4292	046.6			4	10	1	0	26
4426	047.1			3	12	3	0	31
4560	047.6			3	13	6	0	38
4694	048.1			0	11	3	0	25
4828	048.6				12	10	0	37
4962	049.0				*19	9	0	49
5096	049.5				11	*10	0	36
5230	050.0				12	5	0	30
5364	050.5				7	3	0	17
5499	051.0				7	3	0	17
5633	051.4				6	3	0	16
5767	051.9				3	3	0	10
5901	052.4				0	2	0	3
6035	052.9					0	0	0
CIC		102	229	600	501	222	0	
Peak		6	7	20	19	11	0	
Pass		6	5	1	2	3	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #126 — Arc 4.0 km — Ref Pt 085° — 30 June 1968 — 0631-0647 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 224	279	341	389	457	512	586	VIC
0	056.2	0	0						0
134	058.1	0	6						9
268	060.0	0	8	0					13
402	061.9	0	14	5					29
536	063.9	0	*17	13					46
671	065.8	0	16	13					44
805	067.7	0	2	16	0				27
939	069.6		0	*21	20			0	61
1073	071.6			7	36			0	66
1207	073.5			0	16	0	0	0	25
1341	075.4				58	17	*10	0	136
1475	077.3				*46	*68	21	0	220
1609	079.2				12	10	8	0	49
1743	081.2				12	0	0	0	18
1878	083.1				0			0	0
CIC		0	228	265	712	343	140	0	
Peak		0	22	28	89	74	44	0	
Pass		7	6	5	1	2	3	4	

Keystone #127 — Arc 10.0 km — Ref Pt 073° — 30 June 1968 — 0650-0708 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 285	340	386	456	522	VIC
0	061.5	0					0
134	062.2	2					4
268	063.0	1					2
402	063.8	3					4
536	064.5	3					5
671	065.3	3					4
805	066.1	3	0				5
939	066.9	3	4	0			10
1073	067.6	3	4	3			15
1207	068.4	2	3	7			19
1341	069.2	4	6	1			16
1475	069.9	*5	6	6			25
1609	070.7	1	12	5			25
1743	071.5	3	8	6			26
1878	072.2	1	30	28			85
2012	073.0	0	*30	*48			115
2146	073.8		23	15		0	54
2280	074.5		6	12		0	27
2414	075.3		0	26		0	40
2548	076.1			6		0	10
2682	076.8			0	0	0	0
2816	077.6				8	0	14
2950	078.4				30	0	55
3085	079.1				*36	0	66
3219	079.9				17	0	31
3353	080.7				5	0	9
3487	081.5				0	0	0
CIC		144	473	586	344	0	
Peak		8	33	53	37	0	
Pass		5	4	1	2	3	

Keystone #128 — Arc 16.0 km — Ref Pt 071° — 30 June 1968 — 0721-0748 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 216	281	348	417	455	520	VIC
0	057.1	0						0
134	057.6	1						3
268	058.0	1						1
402	058.5	1						2
536	059.0	2						3
671	059.5	3						5
805	060.0	2						3
939	060.4	2						3
1073	060.9	2						4
1207	061.4	3						5
1341	061.9	2	0					3
1475	062.4	2	1					5
1609	062.8	3	3					10
1743	063.3	2	2	0				7
1878	063.8	*3	2	1	0			10
2012	064.3	2	2	4	2			16
2146	064.8	1	2	2	2			13
2280	065.2	2	3	4	3			20
2414	065.7	2	2	3	2			15
2548	066.2	2	2	4	3			20
2682	066.7	1	2	3	6			20
2816	067.2	1	4	4	6			25
2950	067.6	2	*5	4	10			35
3085	068.1	1	3	5	13			36
3219	068.6	1	1	3	13			29
3353	069.1	0	4	5	13			35
3487	069.6		3	*6	12			34
3621	070.0		2	5	8			25
3755	070.5		3	4	23			44
3889	071.0		1	5	25			47
4023	071.5		2	5	*25			50
4157	072.0		3	3	25			47
4292	072.4		1	6	16			37
4426	072.9		0	3	6	0		14
4560	073.4			2	6	2		16
4694	073.9			4	2	4		16
4828	074.4			2	0	4		9
4962	074.8			0		5		7
5096	075.3					10		14
5230	075.8					15		21
5364	076.3					*17		23
5499	076.8					14		19
5633	077.2					14		20
5767	077.7					11		15
5901	078.2					10		14
6035	078.7					13		17
6169	079.2					12	0	17
6303	079.6					10	1	15
6437	080.1					7	2	14
6571	080.6					5	3	12
6706	081.1					3	*6	15
6840	081.6					0	5	9
6974	082.0						1	2
7108	082.5						0	0
CIC		159	196	320	796	558	68	
Peak		5	5	9	29	18	8	
Pass		6	5	4	1	2	3	

Keystone #129 — Arc 4.0 km — Ref Pt 063° — 1 July 1968 — 0623-0638 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 244	282	315	366	418	448	477	VIC
0	055.3		0						0
134	057.2		5	0					4
268	059.2	0	6	9					16
402	061.1	1	2	12		0			16
536	063.0	*5	*7	*17	0	14	0		46
671	064.9	0	1	9	9	65	*38		126
805	066.8		0	0	*29	67	27		135
939	068.8				23	*96	7		143
1073	070.7				5	75	15		101
1207	072.6				0	57	55	0	105
1341	074.5					0	44	6	39
1475	076.4						29	*0	23
1609	078.4						8	3	9
1743	080.3						0	3	3
1878	082.2							0	0
CIC		20	74	170	237	1341	797	45	
Peak		23	12	26	35	102	60	24	
Pass		6	7	5	4	1	3	2	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #130
1 July 1968
0642-0659 EST

Arc 10.0 km
Ref Pt 073°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 250	309	369	428	485	548	VIC
0	059.2	0	0					
134	059.9	0	1					0
268	060.7	0	1					1
402	061.5	0	2					2
536	062.2	0	2					4
671	062.2	0	2					4
805	063.8	0	*5					4
939	064.5	0	5	0				9
1073	065.3	0	5	1				7
1207	066.1	0	2	2				10
1341	066.9	0	1	4				7
1475	067.6	0	1	6				9
1609	068.4	0	0	10				11
1743	069.2	0		*14				16
1878	069.9			6	0			22
2012	070.7			13	4			10
2146	071.5			7	11			28
2280	072.2			0	34			29
2414	073.0				31			52
2548	073.8				41			47
2682	074.5				*37			64
2816	075.3				26			57
2950	076.1				22	0		41
3085	076.8				7	7		34
3219	077.6				16	2		22
3353	078.4				4	5		28
3487	079.1				8	10		14
3621	079.9				0	15		28
3755	080.7					14	0	24
3889	081.5					*19	3	23
4023	082.2					14	1	33
4157	083.0					15	4	25
4292	083.8					6	*4	30
4426	084.5					0	3	18
4560	085.3						1	5
4694	086.1						2	2
4828	086.8						0	4
CIC		0	105	226	859	383	66	0
Peak		0	7	15	45	25	16	
Pass		6	5	4	1	2	3	

Keystone #131
1 July 1968
0705-0736 EST

Arc 16.0 km
Ref Pt 071°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 296	370	433	496	542	572	602	VIC
0	071.0		0						
134	071.5		10						0
268	072.0		10	0					18
402	072.4		12	3					18
536	072.9		11	3					27
671	073.4		13	1					26
805	073.9		12	1					25
939	074.4	*0	10	2					25
1073	074.8	1	*15	9					23
1207	075.3	0	11	12					46
1341	075.8	1	7	14					41
1475	076.3	3	9	11					38
1609	076.8	0	11	12					41
1743	077.2	0	13	11	0				41
1878	077.7		12	*13	2				44
2012	078.2		8	10	0			0	46
2146	078.7		8	12	2			0	32
2280	079.2		5	9	2	0		0	38
2414	079.6		0	6	2	1		0	28
2548	080.1			1	5	2		0	20
2682	080.6			0	6	0	*1	0	8
2816	081.1				7	3	3	0	10
2950	081.6				10	3	1	0	12
3085	082.0				*13	1	0		17
3219	082.5				11				19
3353	083.0				6				16
3487	083.5				3				9
3621	084.0				0				4
3755	084.4					0			0
3889	084.9					9			0
4023	085.4					11			9
4157	085.9					11			11
4292	086.4					*14			11
4426	086.8					14			14
4560	087.3					14			14
4694	087.8					12			12
4828	088.3					10			10
4962	088.8					13			13
5096	089.2					6			6
5230	089.7					6			6
5364	090.2					2			2
						0			0
CIC		21	639	471	257	385	41	0	
Peak		6	15	18	14	17	8	0	
Pass		7	6	1	2	3	5	4	

Keystone #132
3 July 1968
0549-0611 EST

Arc 4.0 km
Ref Pt 155°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 361	418	482	540	602	654	722	VIC
0	112.7							0	0
134	114.7							1	2
268	116.6							*3	6
402	118.5							1	2
536	120.4					0	0	0	53
671	122.3					28	7		306
805	124.3				0	107	*89		119
939	126.2				14	60	17		204
1073	128.1				110	91	27		345
1207	130.0			0	57	*111	0		242
1341	131.9			21	8	99			156
1475	133.9			46	59	72			224
1609	135.8			23	97	36			263
1743	137.7			50	66	46			186
1878	139.6			*52	*111	0			262
2012	141.6			51	23				120
2146	143.5			36	12				77
2280	145.4		0	0	6				9
2414	147.3		1		6				11
2548	149.2		24		3				45
2682	151.2		*24		0				39
2816	153.1		22						35
2950	155.0	0	8						13
3085	156.9	3	6						15
3219	158.8	3	1						7
3353	160.8	*3	2						9
3487	162.7	3	0						5
3621	164.6	3							5
3755	166.5	3							5
3889	168.4	0							0
CIC		74	318	996	2043	2328	500	20	
Peak		3	32	77	149	127	97	9	
Pass		7	1	2	3	4	5	6	

Keystone #133
3 July 1968
0620-0641 EST

Arc 10.0 km
Ref Pt 141°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 357	422	482	539	601	650	VIC
0	115.6						0	0
134	116.4						5	6
268	117.2						2	3
402	117.9					0	6	8
536	118.7					6	16	30
671	119.5					7	*15	30
805	120.3					10	10	29
939	121.0					14	5	27
1073	121.8					29	2	46
1207	122.6					27	2	42
1341	123.3					17	2	29
1475	124.1					15	6	30
1609	124.9					28	6	49
1743	125.6					45	1	68
1878	126.4					45	3	71
2012	127.2					47	1	72
2146	127.9					*52	1	79
2280	128.7					29	1	44
2414	129.5					0	7	9
2548	130.2				0		3	25
2682	131.0				13		0	29
2816	131.8				19			11
2950	132.5			0	7			40
3085	133.3			5	21			87
3219	134.1	0		34	22			138
3353	134.9	0		*69	19			169
3487	135.6	0		54	53			124
3621	136.4	0		28	*51			86
3755	137.2	0		5	50			117
3889	137.9	0		23	51			48
				7	23			

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #133 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 357	422	482	539	601	650	VIC
4023	138.7	0	0	0	21			33
4157	139.5	0	12		5			27
4292	140.2	0	24		0			40
4426	141.0	0	32					54
4560	141.8	0	46					77
4694	142.5	0	60					100
4828	143.3	0	43					71
4962	144.1	0	*65					108
5096	144.8	0	51					85
5230	145.6	0	27					44
5364	146.4	0	10					17
5499	147.1	0	0					0
CIC		0	1323	803	1263	1329	343	
Peak		0	69	74	73	54	23	
Pass		6	1	2	3	4	5	

Keystone #135
4 July 1968
0600-0634 EST

Arc 10.0 km
Ref Pt 205°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 308	365	434	488	543	600	667	VIC
0	179.6					0			0
134	180.4					2			3
268	181.2					5			7
402	181.9					8		0	12
536	182.7					9		0	14
671	183.5					14	0	0	21
805	184.3					25	2	0	42
939	185.0					29	12	0	62
1073	185.8					25	18	0	69
1207	186.6					32	21	0	83
1341	187.3					46	28	0	115
1475	188.1					35	6	0	61
1609	188.9					46	8	0	82
1743	189.6					28	*58	0	137
1878	190.4					35	53	0	140
2012	191.2					40	53	0	148
2146	191.9					*53	29	0	127
2280	192.7					53	10	0	97
2414	193.5					36	3	0	59
2548	194.2					36	1	0	55
2682	195.0					43	1	0	66
2816	195.8					40	1	0	62
2950	196.5					27	1	0	42
3085	197.3					17	1	0	28
3219	198.1					7	1	0	12
3353	198.9					5	5		15
3487	199.6					1	0		2
3621	200.4					1			2
3755	201.2				0	3			5
3889	201.9			0	17	3			30
4023	202.7			3	15	8			40
4157	203.5			1	9	14			36
4292	204.2			1	1	9			17
4426	205.0			1	8	0			14
4560	205.8			5	6				16
4694	206.5			21	24				69
4828	207.3	0		22	67				134
4962	208.1	0	0	42	*75				178
5096	208.8	0	8	72	68				230
5230	209.6	0	12	*80	65				244
5364	210.4	0	33	76	51				255
5499	211.1	0	42	54	44				223
5633	211.9	0	*37	57	39				212
5767	212.7	0	14	5	9				44
5901	213.5	0	8	0	0				14
6035	214.2	0	5						8
6169	215.0	0	5						8
6303	215.8	0	0						0
CIC		0	583	1571	1786	2638	1120	0	
Peak		0	62	85	88	57	66	0	
Pass		3	2	1	4	5	6	7	

Keystone #134
3 July 1968
0650-0728 EST

Arc 16.0 km
Ref Pt 129°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 310	355	453	470	542	610	660	VIC
0	126.6						0	0	0
134	127.1						1	0	2
268	127.6						2	0	3
402	128.0						1	0	2
536	128.5						3	0	5
671	129.0						4	0	6
805	129.5						4	0	7
939	130.0						4	0	7
1073	130.4						2	0	4
1207	130.9						6	0	10
1341	131.4						*8	0	12
1475	131.9					0	6	0	9
1609	132.4					9	2		21
1743	132.8					5	2		13
1878	133.3					1	0		3
2012	133.8					0			0
2146	134.3					5			9
2280	134.8					*14			27
2414	135.2					9			16
2548	135.7					8			16
2682	136.2					13			23
2816	136.7					4			8
2950	137.2					0			0
3085	137.6								0
3219	138.1								0
3353	138.6								0
3487	139.1								0
3621	139.6								0
3755	140.0								0
3889	140.5								0
4023	141.0			0					0
4157	141.5			14					21
4292	142.0			16					25
4426	142.4			*32					50
4560	142.9			20					31
4694	143.4			12					18
4828	143.9			4					6
4962	144.4			0	0				0
5096	144.8				6				7
5230	145.3				36				43
5364	145.8		0		*46				55
5499	146.3		6		2				14
5633	146.8		*18		4				39
5767	147.2		9		9				28
5901	147.7		8		52				76
6035	148.2		8		18				37
6169	148.7		3		0				5
6303	149.2		3						5
6437	149.6		3						6
6571	150.1		3						7
6706	150.6	0	5						9
6840	151.1	2	8						17
6974	151.6	3	0						4
7108	152.1	3							4
7242	152.5	*7							8
7376	153.0	3							4
7510	153.5	1							1
7644	154.0	1							1
7778	154.5	0							0
7913	154.9	1							2
8047	155.4	2							2
8181	155.9	2							3
8315	156.4	2							3
8449	156.9	0							0
CIC		103	260	352	621	245	169	0	
Peak		9	23	34	57	18	9	0	
Pass		3	2	1	4	5	6	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #136 — Arc 4.0 km
4 July 1968 — Ref Pt 226°
0642-0659 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 365	443	478	553	602	665	VIC
0	185.7						0	0
134	187.6						2	4
268	189.5						*32	54
402	191.4						17	29
536	193.3						21	35
671	195.3					0	0	0
805	197.2	0				7		11
939	199.1	1				29		51
1073	201.0	3				53	0	96
1207	202.9	*6				77	21	173
1341	204.9	6				135	64	332
1475	206.8	0			0	*233	53	466
1609	208.7				20	157	53	368
1743	210.6				37	17	83	207
1878	212.6			0	133	25	150	462
2012	214.5			1	*141	0	*185	485
2146	216.4			22	94		33	224
2280	218.3			*52	23		8	133
2414	220.2			43	6		0	79
2548	222.2			51	12			100
2682	224.1			20	0			32
2816	226.0			0				0
CIC		57	678	1662	2630	2328	260	
Peak		8	60	148	254	195	40	
Pass		2	1	3	4	5	6	

Keystone #137 — Arc 4.0 km
5 July 1968 — Ref Pt 069°
0552-0614 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 411	482	549	608	658	718	791	860	VIC
0	055.6	0						0		0
134	057.5	0			0			10		20
268	059.4	0	0		6			48		100
402	061.3	0	2		17	0		126		268
536	063.2	0	*14		40	2	0	*152		377
671	065.2	0	0	0	*69	13	39	118		413
805	067.1			2	59	46	120	124	0	605
939	069.0			12	32	45	136	16	*2	410
1073	070.9			12	0	87	83	0	5	303
1207	*072.8*			*39*		*115*	*122*		*0*	*453*
1341	074.8			5		39	*173			373
1475	076.7			0		9	28			63
1609	078.6					1	0			2
1743	080.5					9				14
1878	082.4					0				0
CIC		0	57	248	802	1315	2514	2129	24	
Peak		0	15	52	73	129	186	160	8	
Pass		1	2	3	4	5	6	7	8	

Keystone #138 — Arc 10.0 km
5 July 1968 — Ref Pt 072°
0620-0642 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 434	480	536	602	670	731	776	850	VIC
0	061.2		0			0				0
134	062.0		6	0	0	7				20
268	062.8		15	12	6	12				69
402	063.5		13	5	30	16				106
536	064.3		22	42	38	10				184
671	065.1		46	66	43	54				340
805	065.9		*57	76	40	61				379
939	066.6		51	*111	*50	73		0	0	464
1073	067.4		10	97	39	87	0	2	1	398
1207	068.2	0	3	54	33	*100	10	12	*7	373
1341	068.9	1	0	70	24	100	14	51	1	435
1475	069.7	*3		17	18	53	58	47	0	314
1609	070.5	1		1	17	0	*68	46		204
1743	071.2	0		1	3		59	*58		183
1878	072.0			7	0		28	39		113
2012	072.8			0			40	2		61
2146	073.5						44	12		80
2280	074.3						7	13		30
2414	075.1						0	0		0

Keystone #138 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 434	480	536	602	670	731	776	850	VIC
CIC		20	798	2001	1228	2055	1174	1009	33	
Peak		6	65	118	55	106	80	72	7	
Pass		3	2	1	4	5	6	7	8	

Keystone #139 — Arc 16.0 km
5 July 1968 — Ref Pt 070°
0648-0725 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 445	480	546	600	666	732	778	862	902	950	VIC
0	053.7	0										0
134	054.2	1										1
268	054.6	1										1
402	055.1	3										3
536	055.6	3										3
671	056.1	3										3
805	056.6	1										1
939	057.0	1										1
1073	057.5	1										1
1207	058.0	0										0
1341	058.5	1										1
1475	059.0	*3										3
1609	059.4	3										3
1743	059.9	1			0							1
1878	060.4	2			3							7
2012	060.9	2			4							8
2146	061.4	0			18							30
2280	061.8				37							59
2414	062.3		0		41							66
2548	062.8		7		49							88
2682	063.3		10		53	0						99
2816	063.8		23	0	64	6						145
2950	064.2		33	9	71	6						183
3085	064.7		44	7	78	24						239
3219	065.2		57	20	77	62						342
3353	065.7		64	68	83	*69						450
3487	066.2		*77	84	*94	62						498
3621	066.6		39	98	70	36						384
3755	067.1		30	97	55	35						348
3889	*067.6*		*20*	*108*	*54*	*33*	*0*					*341*
4023	068.1		0	96	39	33	1	0				275
4157	068.6			78	15	20	1	5				194
4292	069.0			80	8	39	9	11				243
4426	069.5			44	8	50	19	14				223
4560	070.0			15	0	32	22	28				162
4694	070.5			9		0	*58	60				206
4828	071.0			10			56	*72				226
4962	071.4			0			35	50				139
5096	071.9						29	29				94
5230	072.4						8	37				76
5364	072.9						3	20				38
5499	073.4						0	15				26
5633	073.8							27				46
5767	074.3							8				14
5901	074.8							0				0
6035	075.3											0
6169	075.8									0		0
6303	076.2								0	0		0
6437	076.7								6	0	0	9
6571	077.2								14	2	0	26
6706	077.7								9	7	0	23
6840	078.2								6	25	0	40
6974	078.6								*28	*31	0	83
7108	079.1								21	28	0	67
7242	079.6								0	20	0	24
7376	080.1									4	0	5
7510	080.6									0	0	0
CIC		103	1446	2939	3302	1807	885	1348	299	423	0	
Peak		5	80	112	96	74	62	75	33	44	0	
Pass		3	2	1	4	5	6	7	8	9	10	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #140 — Arc 4.0 km
6 July 1968 — Ref Pt 123°
0553-0609 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 303	362	412	473	512	542	VIC
0	082.7	0	0					0
134	084.6	0	18					27
268	086.5	0	25					37
402	088.4	0	21					30
536	090.3	0	23					34
671	092.3	0	16					24
805	094.2	0	20	0				29
939	096.1	0	15	20				51
1073	098.0	0	15	22				54
1207	099.9	0	20	28				70
1341	101.9	0	14	33				70
1475	103.8		*25	46				105
1609	105.7		14	55				102
1743	107.6		17	64				119
1878	109.6		9	59				101
2012	111.5		0	35				51
2146	113.4			62				92
2280	115.3			*127				188
2414	117.2			69				103
2548	119.2			31	0			46
2682	121.1			1	29			40
2816	123.0			0	23			31
2950	124.9				47			63
3085	126.8				25		0	34
3219	128.8				33		0	45
3353	130.7				159	0	0	213
3487	132.6				208	1	0	279
3621	134.5				*262	9	0	359
3755	136.4				158	*22	0	231
3889	138.4				31	0	0	42
4023	140.3				0		0	0
CIC		0	905	2336	3498	115	0	
Peak		0	30	129	305	33	0	
Pass		3	7	1	4	6	5	

Keystone #141 — Arc 10.0 km
6 July 1968 — Ref Pt 114°
0616-0639 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 351	392	440	483	537	VIC
0	094.0	0					0
134	094.8	3					4
268	095.6	3					4
402	096.3	3					4
536	097.1	3					4
671	097.9	5					6
805	098.6	5					6
939	099.4	1					1
1073	100.2	1					1
1207	100.9	1					1
1341	101.7	1					1
1475	102.5	1					1
1609	103.2	1					1
1743	104.0	1					1
1878	104.8	1					1
2012	105.5	1		0			1
2146	106.3	1		5			7
2280	107.1	5		5			11
2414	107.9	2		5			8
2548	108.6	2		7			11
2682	109.4	1		3			5
2816	110.2	2		5			8
2950	110.9	2	0	2			5
3085	111.7	2	3	2			9
3219	112.5	2	6	3			14
3353	113.2	2	6	5			15
3487	114.0	2	7	5			16
3621	114.8	*5	5	2			13
3755	115.5	3	5	10			22
3889	116.3	3	5	2		0	12
4023	117.1	0	7	16		*2	31
4157	117.8		8	8		2	23
4292	118.6		7	18		0	31
4426	119.4		1	22			28
4560	120.1		6	23			35
4694	120.9		10	35			54
4828	121.7		8	42			60
4962	122.5		13	57			84
5096	123.2		21	*66			105
5230	124.0		25	59			102
5364	124.8		23	23			56

Keystone #141 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 351	392	440	483	537	VIC
5499	125.5		17	28			54
5633	126.3		14	10			29
5767	127.1		10	0			12
5901	127.8		20				23
6035	128.6		17		0		21
6169	129.4		*33		7		49
6303	130.1		20		20		49
6437	130.9		8		39		60
6571	131.7		17		20		46
6706	132.4		9		58		86
6840	133.2		7		83		116
6974	134.0		7		92		128
7108	134.7		6		*111		150
7242	135.5		0		100		130
7376	136.3				32		42
7510	137.1				23		30
7644	137.8				5		6
7778	138.6				0		0
CIC		252	1267	1675	2113	16	
Peak		10	39	70	140	13	
Pass		2	3	1	4	5	

Keystone #142 — Arc 16.0 km
6 July 1968 — Ref Pt 129°
0656-0732 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 348	432	472	532	612	625	652	712	VIC
0	122.8	0								0
134	123.2	2								4
268	123.7	3								8
402	124.2	5								11
536	124.7	4								9
671	125.2	5	0	0						12
805	125.6	*6	1	3						20
939	126.1	7	3	4						27
1073	126.6	6	3	4						25
1207	127.1	4	4	4						21
1341	127.6	4	6	4						25
1475	128.0	5	9	7						34
1609	128.5	5	13	9						45
1743	129.0	4	15	11						47
1878	129.5	1	10	8						30
2012	130.0	1	16	6						37
2146	130.4	1	19	11						48
2280	130.9	0	19	19						59
2414	131.4	1	14	27						60
2548	131.9	0	10	26						51
2682	132.4	1	14	30	0					66
2816	132.8	1	*24	28	9					97
2950	133.3	0	24	*46	13					125
3085	133.8		12	39	23					115
3219	134.3		1	30	28					94
3353	134.8		4	18	30		0			87
3487	135.2		6	17	38		2			106
3621	135.7		0	15	39		10			98
3755	136.2			8	36		37			97
3889	136.7			4	53		44	0		129
4023	137.2			8	57		47	8		152
4157	137.6			2	60		*56	*38		189
4292	138.1			2	55		18	42		165
4426	138.6			7	47		0	26		127
4560	139.1			3	28			14		72
4694	139.6			3	22	0		6		52
4828	140.0			3	9	2		5		29
4962	140.5			3	12	*20		0		52
5096	141.0			1	31	7				68
5230	141.5			1	58	14				130
5364	142.0			4	19	8				52
5499	142.4			5	*111	4			0	219
5633	142.9			0	46	0			1	89
5767	143.4				43				2	84
5901	143.9				1				2	6
6035	144.4				0				5	9
6169	144.8								5	9
6303	145.3								*19	30
6437	145.8								2	4
6571	146.3								6	9
6706	146.8								0	0
CIC		245	818	1601	3117	195	767	499	155	
Peak		12	35	51	111	27	71	48	20	
Pass		8	1	2	3	4	5	6	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #143 — Arc 4.0 km
8 July 1968 — Ref Pt 040°
0604-0634 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 336	368	420	488	558	612	670	727	796	VIC
0	353.9			0							0
134	355.8		0	13							20
268	357.7		6	22							42
402	359.7		5	30							53
536	001.6		10	42							78
671	003.5		12	65	0						117
805	005.4		20	59	16						146
939	007.3		34	69	31						206
1073	009.3		36	*79	58						273
1207	011.2		*43	54	75						274
1341	013.1	0	29	59	48						216
1475	015.0	2	8	68	57						225
1609	016.9	3	0	43	59						180
1743	018.9	5		10	36						87
1878	020.8	6		9	57						124
2012	022.7	2		20	69						161
2146	024.6	2		21	14						61
2280	026.6	3		23	28						91
2414	028.5	3		5	51						104
2548	030.4	1		9	50		0				107
2682	032.3	7		36	58	0	33				220
2816	034.2	5		0	*75	10	53				239
2950	036.2	6			50	33	50				226
3085	038.1	5			44	35	33				192
3219	040.0	9			28	25	27				141
3353	041.9	6			10	38	46				156
3487	043.8	6			0	39	61				161
3621	045.8	*5				25	60				136
3755	047.7	0				48	105				237
3889	049.6					64	*133				304
4023	051.5					*66	81				230
4157	053.4					42	73				178
4292	055.4					21	61	0			126
4426	057.3					0	2	30	0		50
4560	059.2						16	66	35		184
4694	061.1						0	*118	*139	0	415
4828	063.1							116	113	23	411
4962	065.0							34	98	*46	302
5096	066.9							0	0	15	28
5230	068.8									0	0
CIC		274	723	2634	3267	1600	2990	1300	1379	301	
Peak		12	48	94	110	81	142	125	151	66	
Pass		4	3	2	1	5	6	7	8	9	

Keystone #144 — Arc 10.0 km
8 July 1968 — Ref Pt 036°
0644-0722 EST — SO_2 in ppbm

Cum y (m)	Dir (°)	Traverse Height (m) 400	442	486	558	612	660	724	797	841	VIC
0	021.4	0	0								0
134	022.2	0	2								3
268	022.9	0	6								7
402	023.7	0	3								4
536	024.5	0	1								1
671	025.2	0	0								0
805	026.0	0	2								3
939	026.8	0	5								5
1073	027.5	0	7								8
1207	028.3	0	7								8
1341	029.1	0	*8								9
1475	029.9	0	3								4
1609	030.6	0	3								4
1743	031.4	0	3		0						4
1878	032.2	0	6		2						11
2012	032.9	0	5		14						29
2146	033.7	0	2		16						30
2280	034.5	0	2	0	10						20
2414	035.2	0	6	5	13						35
2548	036.0		0	13	6						29
2682	036.8			12	5						26
2816	037.5			*17	5						35
2950	038.3			14	7						33
3085	039.1			14	6						31
3219	039.8			6	5	0					17
3353	040.6			6	14	8					43
3487	041.4			8	13	14					53
3621	042.1			9	18	23					77
3755	042.9			9	21	29					89
3889	043.7			12	14	35					88
4023	044.5			8	15	*40	0				93
4157	045.2			5	20	35	3				93
4292	046.0			6	27	29	8				105
4426	046.8			5	31	30	9				114
4560	047.5			3	31	35	13				124
4694	048.3			6	18	29	14				100
4828	049.1			2	12	23	24				91
4962	049.8			7	18	10	22				89
5096	050.6			0	25	15	29	0			106
5230	051.4				22	22	*33	5			125
5364	052.1				8	28	29	8			109
5499	052.9				*35	23	25	2			132
5633	053.7				7	28	25	7			100
5767	054.4				0	28	22	10			90
5901	055.2					30	15	18			97
6035	056.0					28	17	13			87
6169	056.7					23	21	20			98
6303	057.5					10	25	23		0	94
6437	058.3					7	23	24		2	91
6571	059.1					6	25	31	0	6	110
6706	059.8					5	40	*39	32	9	200
6840	060.6					0	12	28	*57	10	169
6974	061.4						10	5	42	13	104
7108	062.1						8	7	35	*35	120
7242	062.9						0	0	21	0	33
7376	063.7								28		43
7510	064.4								7		11
7644	065.2								0		0
CIC		0	261	591	1563	2117	1629	860	791	268	
Peak		0	10	24	51	46	46	47	62	38	
Pass		9	8	7	1	2	3	4	5	6	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #145 — Arc 4.0 km
8 July 1968 — Ref Pt 070°
0907-0936 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 130	380	490	556	605	660	728	789	864	922	1060	VIC
0	046.9		0										0
134	048.9	0	2										8
268	050.8	0	1										7
402	052.7	0	*5										24
536	054.6	0	3	0									13
671	056.6	0	2	2									18
805	058.5	0	1	2									11
939	060.4	0	1	2								0	12
1073	062.3	0	3	2								20	91
1207	064.2	0	1	6								43	176
1341	066.2	0	2	7		0	0	0				22	106
1475	068.1	0	1	2	0	*10	23	14		0		48	264
1609	070.0	0	1	*7	6	24	10	46		24		*54	406
1743	071.9	0	1	0	3	21	23	47	0	53	0	0	254
1878	073.8	0	1		10	5	46	*72	13	70	39		475
2012	075.8	0	1		*16	0	*51	69	14	76	40		497
2146	077.7	0	1		11		24	50	*51	46	27		392
2280	079.6	0	0		0		0	0	17	*82	95		425
2414	081.5		1						0	85	*113		454
2548	083.4		0							70	106		403
2682	085.4									23	64		207
2816	087.3									47	54		226
2950	089.2									0	37		97
3085	091.1										0		0
CIC		0	106	108	161	215	637	1067	339	2072	2059	670	
Peak		0	6	10	25	32	53	81	66	91	132	62	
Pass		11	10	9	8	7	6	1	2	3	4	5	

Keystone #146 — Arc 4.0 km
9 July 1968 — Ref Pt 055°
0558-0611 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 288	324	362	471	500	560	618	VIC
0	016.6	0							0
134	018.5	7							7
268	020.4	8							8
402	022.3	8							8
536	024.3	7							7
671	026.2	5		0					4
805	028.1	5	0	9					23
939	030.0	5	7	6					23
1073	031.9	3	8	5					20
1207	033.9	7	10	13					42
1341	035.8	*15	6	7					34
1475	037.7	7	5	12					34
1609	039.6	12	8	14					46
1743	041.6	3	7	19					47
1878	043.5	0	13	21					53
2012	045.4		*24	24			0	0	72
2146	047.3		7	*42			6	0	98
2280	049.2		3	0			*37	0	62
2414	051.2		0		0	0	0	0	0
2548	053.1				92	*59		0	240
2682	055.0				*129	10		0	251
2816	056.9				21	0		0	38
2950	058.8				13				23
3085	060.8				0				0
CIC		327	352	608	914	248	153	0	
Peak		16	34	105	175	67	46	0	
Pass		4	3	2	1	5	6	7	

Keystone #147 — Arc 10.0 km
9 July 1968 — Ref Pt 052°
0620-0638 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 246	318	374	444	490	538	590	VIC
0	036.6	0							0
134	037.4	6							11
268	038.2	8							16
402	038.9	9							18
536	039.7	10							20
671	040.5	10							20
805	041.2	5							9
939	042.0	8	0						16
1073	042.8	9	12						38
1207	043.5	7	9						29
1341	044.3	*13	10						42
1475	045.1	6	13	0					33
1609	045.9	7	19	13					66
1743	046.6	0	20	30					84
1878	047.4		*29	*37	0				112
2012	048.2		13	31	5				81
2146	048.9		14	24	6	0			73
2280	049.7		0	8	2	35			61
2414	050.5			0	23	*69			123
2548	051.2				*57	60			163
2682	052.0				23	46		0	94
2816	052.8				42	44		0	119
2950	053.5				18	58	0	0	101
3085	054.3				9	0	53	0	85
3219	055.1				7		*55	0	85
3353	055.8				6		30	0	49
3487	056.6				0		8	0	11
3621	057.4						0	0	0
CIC		352	492	512	707	1116	525	0	
Peak		16	35	50	67	77	74	0	
Pass		7	6	5	1	2	3	4	

Keystone #148 — Arc 16.0 km
9 July 1968 — Ref Pt 058°
0655-0724 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 152	310	370	435	490	550	610	VIC
0	032.5	0							0
134	033.0	2							10
268	033.5	2							10
402	034.0	3							11
536	034.5	3							11
671	034.9	2							9
805	035.4	3							14
939	035.9	3							15
1073	036.4	3							14
1207	036.9	3							15
1341	037.3	*3							11
1475	037.8	3							12
1609	038.3	2							9
1743	038.8	2							9
1878	039.3	2	0						9
2012	039.8	0	3	0					8
2146	040.2		3	2					13
2280	040.7		4	6					21
2414	041.2		3	7					22
2548	041.7		3	8					23
2682	042.2		4	8					24
2816	042.6		3	*9					23
2950	043.1		4	9					27
3085	043.6		3	3					14
3219	044.1		*6	6					28
3353	044.6		3	9	0				24
3487	045.0		1	6	4				21
3621	045.5		1	2	7				19
3755	046.0		1	1	10				19
3889	046.5		0	3	10				20
4023	047.0			0	9				14
4157	047.4				12				19
4292	047.9				9				15
4426	048.4				24	0			39
4560	048.9				*23	1			39
4694	049.4				27	7	0		54
4828	049.8				36	9	5		79
4962	050.3				37	5	17		94
5096	050.8				20	12	16		76
5230	051.3				2	23	24		78
5364	051.8				0	*49	7		86
5499	052.2					43	21		100
5633	052.7					26	*32		92

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #148 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 152	310	370	435	490	550	610	VIC
5767	053.2					3	27		48
5901	053.7					2	8		15
6035	054.2					0	21		33
6169	054.6						13		21
6303	055.1						3		4
6437	055.6						1	0	2
6571	056.1						0	*3	4
6706	056.6							0	1
6840	057.0							0	0
6974	057.5							1	1
7108	058.0							0	0
CIC		136	154	283	825	642	700	14	
Peak		5	7	12	45	49	34	3	
Pass		7	6	5	1	2	3	4	

Keystone #150 — Arc 10.0 km, Ref Pt 115°, SO_2 in pphm, 10 July 1968, 0623-0708 EST

Cum y (m)	Dir (°)	Traverse Height (m) 404	424	432	498	544	604	639	660	VIC
0	092.7	0								0
134	093.5	10								6
268	094.3	10								6
402	095.0	12								6
536	095.8	10								6
671	096.6	9								5
805	097.3	7		0						4
939	098.1	6		13						16
1073	098.9	*27		54						68
1207	099.6	6		112						114
1341	100.4	6		101						103
1475	101.2	8		79						82
1609	101.9	7		*112						115
1743	102.7	5		118						119
1878	103.5	5		66						68
2012	104.2	7	0	21						24
2146	105.0	6	5	16						21
2280	105.8	7	3	27						31
2414	106.5	8	22	27						39
2548	107.3	8	*114	20						67
2682	108.1	9	88	21						58
2816	108.9	7	69	20						49
2950	109.6	8	20	21						32
3085	110.4	8	16	15						25
3219	111.2	6	0	3						7
3353	111.9	9		12						16
3487	112.7	6		7						10
3621	113.5	3		12						13
3755	114.2	7		7						11
3889	115.0	5		10						13
4023	115.8	5		15	0					17
4157	116.5	8		19	7					33
4292	117.3	8		15	5					26
4426	118.1	7		16	7					30
4560	118.8	7		3	16					31
4694	119.6	8		6	18					38
4828	120.4	8		5	21				0	40
4962	121.1	8		5	20			0	0	38
5096	121.9	7		12	29			14	0	69
5230	122.7	6		2	35			31	0	81
5364	123.5	0		5	38			30	0	84
5499	124.2			5	36		0	30	0	81
5633	125.0			6	25		7	25	0	72
5767	125.8			35	27		40	39	0	155
5901	126.5			56	24	0	60	36	0	194
6035	127.3			52	24	17	*83	22	0	234
6169	128.1			12	8	50	76	10	0	198
6303	128.8			20	65	55	65	34	0	302
6437	129.6			0	99	72	55	10	0	328
6571	130.4				*104	80	32	22	0	326
6706	131.1				73	*83	5	54	0	273
6840	131.9				80	46	0	*34	0	210
6974	132.7				23	9		13	0	57
7108	133.4				0	3		0	0	5
7242	134.2					0				0
CIC		1086	1207	4222	2804	1488	1517	1449	0	
Peak		32	121	135	112	91	87	56	0	
Pass		8	1	7	2	3	4	6	5	

Keystone #149 — Arc 4.0 km, Ref Pt 123°, SO_2 in pphm, 10 July 1968, 0559-0618 EST

Cum y (m)	Dir (°)	Traverse Height (m) 310	371	429	484	554	578	608	VIC
0	080.7	0	0						0
134	082.7	2	*39						66
268	084.6	*6	30						57
402	086.5	6	12						28
536	088.4	6	46						83
671	090.3	6	27						52
805	092.3	6	9						24
939	094.2	5	0	0					8
1073	096.1	6		24					46
1207	098.0	6		24					46
1341	099.9	7		*37	0				67
1475	101.9	7		35	9				79
1609	103.8	0		25	8				52
1743	105.7			20	9				45
1878	107.6			13	22				56
2012	109.6			12	25			0	60
2146	111.5			23	38			*12	108
2280	113.4			7	80			2	145
2414	115.3			27	*106			6	222
2548	117.2			5	90			14	168
2682	119.2			0	75	0		0	125
2816	121.1				81	31	0		174
2950	123.0				46	70	20		180
3085	124.9				35	*166	24		284
3219	126.8				12	154	*55		252
3353	128.8				0	57	14		81
3487	130.7					12	0		14
3621	132.6					0			0
CIC		221	584	897	2278	1753	405	119	
Peak		12	53	42	137	196	60	22	
Pass		7	6	5	4	1	3	2	

Keystone #151 — Arc 4.0 km, Ref Pt 150°, SO_2 in pphm, 10 July 1968, 0723-0747 EST

Cum y (m)	Dir (°)	Traverse Height (m) 367	434	480	545	604	635	668	724	794	VIC
0	123.1		0						0		0
134	125.0		25						10	0	56
268	126.9		12				0		58	24	160
402	128.9		3			0	10		9	19	64
536	130.8		10	0		6	69	0	*58	16	210
671	132.7		20	25		27	*113	15	82	*77	497
805	134.6	0	24	33		39	131	*90	19	21	423
939	136.6	2	28	45	0	49	98	96	14	0	393
1073	138.5	6	23	*59	28	45	35	104	97		550
1207	140.4	*3	30	60	115	32	0	89	72		599
1341	142.3	3	21	51	195	36		89	23		624
1475	144.2	0	13	40	*231	14		90	53		675
1609	146.2		22	0	59	*74		100	0		338
1743	148.1		*42		16	28		32			161
1878	150.0		29		0	13		0			59
2012	151.9		9			0					14
2146	153.8		0								0
CIC		53	1114	1124	2307	1296	1636	2530	1779	563	
Peak		12	49	70	242	76	151	135	124	93	
Pass		9	8	7	1	2	3	4	5	6	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #152 — Arc 10.0 km
14 July 1968 — Ref Pt 046°
0633-0640 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 315	357	386	447	490	556	624	VIC
0	025.3	0	0						0
134	026.0	0	4						4
268	026.8	0	11						11
402	027.6	0	*23						22
536	028.3	0	25						24
671	029.1	0	15						14
805	029.9	0	0						0
939	030.6	0							0
1073	031.4								0
1207	032.2								0
1341	032.9			0					0
1475	033.7			76					91
1609	034.5			80					97
1743	035.2			*98					118
1878	036.0			45					54
2012	036.8			22	0				27
2146	037.5			23	9				41
2280	038.3			28	32				78
2414	039.1			14	36				67
2548	039.9			0	*55				77
2682	040.6				11				15
2816	041.4				0		0		0
2950	042.2						8		15
3085	042.9						14		25
3219	043.7					0	20		35
3353	044.5					13	66		137
3487	045.2					44	94		232
3621	046.0					*58	*87	0	240
3755	046.8					34	14	6	85
3889	047.5					12	0	5	27
4023	048.3					8		9	28
4157	049.1					0		9	16
4292	049.8							12	22
4426	050.6							*14	25
4560	051.4							6	11
4694	052.1							0	0
CIC		0	279	1386	510	603	1085	220	
Peak		0	29	111	55	58	104	19	
Pass		6	7	5	4	1	2	3	

Keystone #153 — Arc 16.0 km
14 July 1968 — Ref Pt 034°
0658-0728 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 320	351	390	440	500	559	620	647	663	VIC
0	022.5	0	0								0
134	023.0	0	5								4
268	023.4	0	7								7
402	023.9	0	6								6
536	024.4	0	6								6
671	024.9	0	15								14
805	025.4	0	18								17
939	025.8	0	13								12
1073	026.3	0	10								9
1207	026.8	0	15	0							14
1341	027.3	0	22	6							28
1475	027.8	0	25	18							45
1609	028.2	0	*54	8							60
1743	028.7	0	25	16							42
1878	029.2	0	3	*24							31
2012	029.7		0	9							11
2146	030.2			32							38
2280	030.6			15							18
2414	031.1			15							17
2548	031.6			8							10
2682	032.1			0							0
2816	032.6										0
2950	033.0				0						0
3085	033.5				13						18
3219	034.0				63						93
3353	034.5				62						91
3487	035.0				*56						82
3621	035.4				11						16
3755	035.9				0						0
3889	036.4					0					0
4023	036.9					7					12
4157	037.4					18					29
4292	037.8					*63					101
4426	038.3					62					99
4560	038.8					31					50
4694	039.3					6					10
4828	039.8					3	0	0			5
4962	040.2					0	1	12			16
5096	040.7						16	31			62
5230	041.2						4	69			88
5364	041.7						23	80			132
5499	042.2						30	*70			130
5633	042.6						24	20			62
5767	043.1						21	5			38
5901	043.6						22	0			36
6035	044.1						61				97
6169	044.6						*73				116
6303	045.0						48				77
6437	045.5						24		0		38
6571	046.0						11		2		18
6706	046.5						0		5		3
6840	047.0								3		2
6974	047.4								4		2
7108	047.9								5		3
7242	048.4								5		3
7376	048.9								4		2
7510	049.4								1		1
7644	049.8								0		0
7778	050.3								1		1
7913	050.8								3		2
8047	051.3								14		8
8181	051.8								*21		12
8315	052.2								7		4
8449	052.7								17		10
8583	053.2								0		0
8717	053.7										0
8851	054.2										0
8985	054.7									0	0
9120	055.1									2	1
9254	055.6									2	1
9388	056.1									*4	2
9522	056.6									3	1
9656	057.1									2	1
9790	057.6									0	0
CIC		0	804	536	732	686	1282	1026	331	52	
Peak		0	58	52	67	69	74	85	27	5	
Pass		8	9	7	6	1	2	3	5	4	

Keystone #154 — Arc 4.0 km
14 July 1968 — Ref Pt 048°
0748-0802 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 317	388	440	490	560	620	680	VIC
0	019.2		0						0
134	021.1		17						29
268	023.0		88		0				145
402	024.9	0	*110		20				213
536	026.9	*16	43		38				163
671	028.8	8	0	0	86				153
805	030.7	14		77	101				293
939	032.6	3		*151	*105				380
1073	034.6	0		130	65				282
1207	036.5			50	33	0			120
1341	038.4			51	0	6	0		80
1475	040.3			35		27	7		105
1609	042.2			0		43	13	0	95
1743	044.2					53	10	0	110
1878	046.1					*63	10	0	126
2012	048.0					10	29	0	65
2146	049.9					10	27	0	61
2280	051.8					0	31	0	50
2414	053.8						*39	0	63
2548	055.7						17	0	28
2682	057.6						19	0	30
2816	059.5						7	0	11
2950	061.4						0	0	0
CIC		149	929	1770	1601	761	753	0	
Peak		26	142	185	114	67	43	0	
Pass		7	6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #155 — Arc 4.0 km
17 July 1968 — Ref Pt 098°
0802-0819 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 308	352	440	490	542	597	640	674	VIC
0	076.9		0							0
134	078.8		8							14
268	080.7		12							20
402	082.6		*28							49
536	084.6		35							61
671	086.5		17		0					31
805	088.4		17	0	16		0			53
939	090.3		13	7	71		13			148
1073	092.2		0	77	83		20			280
1207	094.2	0		*85	*119	0	22		0	347
1341	096.1	6		56	94	9	20		0	276
1475	098.0	6		15	73	20	53		0	232
1609	099.9	7		21	31	10	113	0	0	252
1743	101.8	*8		9	0	24	*241	45	0	424
1878	103.8	14		0		111	174	*47	0	452
2012	105.7	2				160	120	30	0	471
2146	107.6	3				*172	0	0	0	249
2280	109.5	0				29			0	41
2414	111.4					19			0	27
2548	113.4					26			0	36
2682	115.3					19				27
2816	117.2					15				22
2950	119.1					15				22
3085	121.1					0				0
CIC		166	464	963	1748	2251	2779	616	0	
Peak		23	43	100	138	172	252	117	0	
Pass		8	7	6	5	4	1	3	2	

Keystone #156 — Arc 10.0 km
17 July 1968 — Ref Pt 097°
0823-0842 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 303	390	548	608	640	657	VIC
0	087.0			0				0
134	087.8			3				10
268	088.5			6				18
402	089.3			7				19
536	090.1			1				2
671	090.9			18				53
805	091.6		0	37				107
939	092.4	0	5	77				243
1073	093.2	0	5	38				120
1207	093.9	0	8	16				73
1341	094.7	0	7	20				82
1475	095.5	0	5	104				318
1609	096.2	0	7	143				440
1743	097.0	0	7	157	0			479
1878	097.8	0	6	174	17			548
2012	098.5	0	*10	*196	*89	0		711
2146	099.3	0	0	91	101	3	0	392
2280	100.1	0		170	76	9	*4	598
2414	100.8			30	5	0	2	94
2548	101.6			19	1	0	0	56
2682	102.4			31	7	0		100
2816	103.1			13	0	0		38
2950	103.9			9		2		28
3085	104.7			7		5		25
3219	105.5			0		*19		13
3353	106.2					5		4
3487	107.0					0		0
CIC		0	216	4900	1064	161	24	
Peak		0	12	201	103	21	7	
Pass		6	5	4	1	3	2	

Keystone #157 — Arc 4.0 km
19 July 1968 — Ref Pt 048°
0557-0607 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 410	468	527	594	624	662	VIC
0	044.2		0		0			0
134	046.1		6		10			23
268	048.0		10		48			78
402	049.9	0	14	0	*102	0		154
536	051.8	6	*31	14	7	16		106
671	053.8	*12	43	17	0	*79		187
805	055.7	10	2	54		78		181
939	057.6	6	0	*78		21	0	159
1073	059.5	5		52		0	*5	100
1207	061.4	0		20			1	34
1341	063.4			0			0	0
CIC		137	384	841	599	695	20	
Peak		15	51	97	120	167	9	
Pass		6	5	4	1	3	2	

Keystone #158 — Arc 10.0 km
19 July 1968 — Ref Pt 061°
0612-0631 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 348	420	460	537	596	645	683	699	VIC
0	057.2					0				0
134	057.9					7				10
268	058.7					16				23
402	059.5					*76				110
536	060.2					76				109
671	061.0					59				85
805	061.8	0	0			38				55
939	062.5	1	6	0	0	25				46
1073	063.3	3	*8	2	8	2				37
1207	064.1	3	6	4	*32	0	0			79
1341	064.8	1	1	3	23		8		0	62
1475	065.6	*7	0	1	26		*18		0	84
1609	066.4	1		4	15		15	0	0	53
1743	067.1	0		*7	4		15	6	0	40
1878	067.9			4	0		3	*40	0	39
2012	068.7			2			0	8	0	9
2146	069.5			0				19	0	13
2280	070.2							0	0	0
CIC		56	72	95	390	1069	216	260	0	
Peak		9	9	10	33	103	20	40	0	
Pass		8	7	6	5	1	2	3	4	

Keystone #159 — Arc 16.0 km
19 July 1968 — Ref Pt 070°
0636-0657 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 407	480	530	598	666	720	734	771	VIC
0	068.6				0					0
134	069.0				3					6
268	069.5				5					10
402	070.0	0		0	9					16
536	070.5	2		4	11					31
671	071.0	3	0	5	14					39
805	071.4	2	*4	5	*18					53
939	071.9	3	1	6	17					48
1073	072.4	*7	2	6	6					39
1207	072.9	4	3	8	4					32
1341	073.4	3	1	7	0					20
1375	073.8	3	1	9						22
1609	074.3	3	2	9						24
1743	074.8	5	0	10						25
1878	075.3	2		*12		0				24
2012	075.8	0		7		5		0		19
2146	076.2			0		6		5		14
2280	076.7					14	0	16		33
2414	077.2					39	3	18		79
2548	077.7					68	8	24		135
2682	078.2					*63	19	30		140
2816	078.6					15	17	*24		56
2950	079.1					0	17	12		24
3086	079.6						23	12		29
3219	080.1						49	8		50
3353	080.6						*48	9		50
3487	081.0						29	8		31
3621	081.5						0	0		0
3755	082.0								0	0
3889	082.5								4	4
4023	083.0								*4	4
4157	083.4								0	0
4292	083.9									
CIC		139	59	311	313	750	763	597	27	
Peak		8	5	13	21	75	55	32	10	
Pass		8	7	6	1	2	3	5	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #160
21 July 1968
0555-0631 EST

Arc 4.0 km
Ref Pt 181°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 449	505	560	625	685	745	812	VIC
0	165.6					0	0		0
134	167.6					8	5	0	21
268	169.5					14	5	10	49
402	171.4					20	7	17	74
536	173.3					30	13	*22	109
671	175.2					37	19	10	109
805	177.2			0		25	23	8	94
939	179.1			3		22	29	5	98
1073	181.0			6		29	36	0	116
1207	182.9			7		37	*40		139
1341	184.8			3		40	28		117
1475	186.8			2	0	43	31		125
1609	188.7			2	6	48	21		126
1743	190.6			10	16	52	16		154
1878	192.5			3	12	48	14		126
2012	194.4			21	12	54	22		177
2146	196.4			6	9	48	20		136
2280	198.3			23	5	50	10		142
2414	200.2			14	6	52	20		148
2548	202.1		0	23	8	47	17		156
2682	204.1		8	8	23	48	9		157
2816	206.0		36	25	18	*60	13		242
2950	207.9		18	33	18	59	12		226
3085	209.8		15	23	16	48	12		184
3219	211.7		18	21	23	47	10		193
3353	213.7		20	14	18	53	8		181
3487	215.6		31	14	28	44	8		199
3621	217.5		48	14	31	31	6		206
3755	219.4		40	31	27	36	7		223
3889	221.3		*57	36	36	37	6		270
4023	223.3	0	39	40	38	40	0		251
4157	225.2	5	12	35	52	32			218
4292	227.1	*8	24	32	*53	28			233
4426	229.0	6	35	44	59	21			262
4560	230.9	5	22	42	48	21			220
4694	232.9	7	10	40	29	18			168
4828	234.8	6	2	44	16	22			145
4962	236.7	0	5	31	12	22			111
5096	238.6		6	45	7	22			127
5230	240.6		5	57	7	22			144
5364	242.5		5	*66	8	9			141
5499	244.4		2	58	0	13			116
5633	246.3		2	23		0			40
5767	248.2		2	42					70
5901	250.2		2	22					39
6035	252.1		5	33					61
6169	254.0		7	48					88
6303	255.9		18	37					87
6437	257.8		6	40					73
6571	259.8		0	7					11
6706	261.7			0					0
CIC		128	1794	4048	2295	5157	1665	260	
Peak		12	65	72	67	64	43	28	
Pass		7	6	5	1	2	3	4	

Keystone #161
21 July 1968
0643-0726 EST

Arc 10.0 km
Ref Pt 264°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 445	491	555	625	689	731	VIC
0	253.2				0		0	0
134	254.0				4		1	8
268	254.8				7		2	15
402	255.5				5		2	12
536	256.3				8	0	1	16
671	257.1			0	8	3	2	22
805	257.9			4	12	5	1	38
939	258.6			7	17	7	*2	53
1073	259.4			8	17	4	2	53
1207	260.2			12	15	5	0	54
1341	260.9			11	18	7	2	64
1475	261.7			12	21	6	2	70
1609	262.5			18	36	5	3	108
1743	263.2			23	41	6	3	127
1878	264.0			28	27	5	2	109
2012	264.8			28	28	4	2	108
2146	265.5			18	*42	5	0	113
2280	266.3			17	40	4		108
2414	267.1			16	44	3		111
2548	267.8			19	31	5		96
2682	268.6			20	37	*8		115
2816	269.4			21	23	4		84
2950	270.1		0	22	30	0		93
3085	270.9		5	15	26			80
3219	271.7		7	14	16			65
3353	272.5		9	18	17			77
3487	273.2		13	16	12			70
3621	274.0		14	24	6			74
3755	274.8		5	26	5			61
3889	275.5		8	29	5			72
4023	276.3		12	*30	2			75
4157	277.1		17	22	3			69
4292	277.8		20	25	1			76
4426	278.6		27	24	1			85
4560	279.4		27	20	1			77
4694	280.1		38	20	0			91
4828	280.9	0	47	21	0			106
4962	281.7	1	40	14				86
5096	282.4	1	42	13				85
5230	283.2	1	42	13				86
5364	284.0	0	39	11				77
5499	284.7	1	28	14				67
5633	285.5	1	19	19				62
5767	286.3	0	33	32				108
5901	287.1	0	33	30				103
6035	287.8	0	16	24				68
6169	288.6	1	18	32				85
6303	289.4	1	30	26				91
6437	290.1	0	32	20				83
6571	290.9	1	28	10				60
6706	291.7	2	44	0				67
6840	292.4	*12	48					86
6974	293.2	14	32					64
7108	294.0	9	33					60
7242	294.7	0	*56					82
7376	295.5		58					84
7510	296.3		41					60
7644	297.0		14					21
7778	297.8		16					24
7913	298.6		3					4
8047	299.3		9					13
8181	300.1		21					30
8315	300.9		13					19
8449	301.6		8					12
8583	302.4		5					7
8717	303.2		0					0
CIC		167	3752	3029	2168	318	100	
Peak		22	62	44	47	10	6	
Pass		6	5	4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #162
21 July 1968
0830-0902 EST

Arc 4.0 km
Ref Pt 355°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 330	387	452	504	552	642	690	752	810	870	940	1019	1090	VIC
0	349.2							0							0
134	351.2				0		0	18							26
268	353.1				2		4	15	0						33
402	355.0				12		30	*12	6						98
536	356.9			0	*13		28	16	4	0					99
671	358.8		0	2	4	0	*25	18	1	8		0			95
805	000.8		4	2	5	1	9	18	9	*22	0	8			128
939	002.7		*8	7	8	10	6	0	3	7	9	15			127
1073	004.6		2	6	0	14	11	10	2	17	9	44	0		206
1207	006.5		3	4		9	13	0	7	3	56	36	7		248
1341	008.4		0	8		*15	0		4	14	23	52	22		259
1475	010.4	0	1	*11		5			6	13	17	53	27	0	247
1609	012.3	3	0	3		0			16	24	30	57	26	0	290
1743	014.2	*5		0					*16	27	57	58	29	0	348
1878	016.1	3							17	4	*59	56	44	0	343
2012	018.1	0							9	0	56	48	38	0	283
2146	020.0								0		25	22	35	0	158
2280	021.9										27	56	*54	0	267
2414	023.8										25	*59	31	0	223
2548	025.7										14	15	5	0	65
2682	027.7										6	8	0	0	28
2816	029.6										0	0		0	0
CIC		38	64	151	161	198	452	379	360	496	1480	2104	1145	0	
Peak		10	10	14	16	18	34	22	22	31	70	68	56	0	
Pass		13	12	11	10	9	1	2	3	4	5	6	7	8	

Keystone #163
21 July 1968
0907-0939 EST

Arc 10.0 km
Ref Pt 017°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 100	390	510	632	634	748	880	1009	VIC
0	004.7				0					0
134	005.5				2					4
268	006.2				1					2
402	007.0				3					6
536	007.8				*12				0	20
671	008.5				12			0	1	22
805	009.3				4		0	1	*4	25
939	010.1				4	0	5	3	0	34
1073	010.9			0	7	3	5	4		46
1207	011.6			2	4	4	4	6		56
1341	012.4			2	4	7	8	5		69
1475	013.2		0	2	4	4	10	2		62
1609	013.9		3	3	4	6	11	1		83
1743	014.7		4	4	3	2	*13	1		88
1878	015.5		4	3	2	2	8	1		70
2012	016.2		6	2	1	4	6	3		78
2146	017.0		7	0	4	5	4	4		82
2280	017.8		3	0	6	5	5	2		57
2414	018.5		3	0	4	1	4	1		43
2548	019.3		4	0	4	1	5	5		63
2682	020.1		1	0	2	1	4	4		37
2816	020.8		2	0	1	1	4	6		49
2950	021.6		5	0	0	1	6	7		76
3085	022.4		5	0		3	5	7		77
3219	023.1		4	6		2	0	1		47
3353	023.9		1	13		3		2		64
3487	024.7	0	4	19		5		6		118
3621	025.5	4	*18	*20		11		7		230
3755	026.2	3	8	13		*16		8		161
3889	027.0	5	2	13		16		*11		156
4023	027.8	4	5	7		7		6		118
4157	028.5	3	7	3		0		0		72
4292	029.3	3	4	2				0		50
4426	030.1	*2	4	0						37
4560	030.8	3	3							42
4694	031.6	1	3							26
4828	032.4	0	0							0
4962	033.1		2							9
5096	033.9		0							0
CIC		103	401	419	329	404	381	378	17	
Peak		7	19	23	13	19	15	13	9	
Pass		8	7	6	1	5	2	3	4	

Keystone #164
22 July 1968
0557-0620 EST

Arc 4.0 km
Ref Pt 063°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 252	320	370	439	496	552	614	677	700	735	VIC
0	032.3	0	0									0
134	034.2	0	14									22
268	036.1	0	12									18
402	038.0	0	12									18
536	039.9	0	13									20
671	041.9	0	*17									27
805	043.8	0	7									11
939	045.7	0	6	0	0							9
1073	047.6		0	9	12							34
1207	049.6			12	55	0						112
1341	051.5			32	*74	31						223
1475	053.4			*31	57	15						167
1609	055.3			31	23	*83						169
1743	057.2			12	32	28	0	0				116
1878	059.2			0	18	40	9	8				120
2012	061.1				0	37	6	16				92
2146	063.0					14	22	*30	0			106
2280	064.9					3	*13	0	*30	0	0	60
2414	066.8					0	0		17	*2	0	22
2548	068.8								0	2	0	2
2682	070.7									0	0	0
CIC		0	285	454	971	794	177	194	169	16	0	
Peak		0	23	52	81	72	36	30	56	9	0	
Pass		10	9	8	7	6	1	2	3	5	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #165
22 July 1968
0625-0655 EST

Arc 10.0 km
Ref Pt 045°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 240	303	383	440	498	554	620	670	VIC
0	028.9	0	0							0
134	029.6	0	4							7
268	030.4	0	3							5
402	031.2	0	1							2
536	031.9	0	2							5
671	032.7	0	2	0						5
805	033.5	0	3	5						16
939	034.2	0	4	12	0					30
1073	035.0	0	4	3	4					19
1207	035.8	0	5	1	14					34
1341	036.5	0	7	0	*23					48
1475	037.3	0	*8	10	15					55
1609	038.1	0	4	2	3					17
1743	038.9	0	6	3	0					17
1878	039.6	0	7	*16						44
2012	040.4	0	9	0						16
2146	041.2	0	6							12
2280	041.9	0	8							15
2414	042.7	0	8							15
2548	043.5	0	8							16
2682	044.2	0	4							8
2816	045.0	0	5				0			9
2950	045.8	0	3			0	2			10
3085	046.5		1			8	3			19
3219	047.3		0			23	4			41
3353	048.1					29	4			51
3487	048.8					*34	3			57
3621	049.6					23	4			42
3755	050.4					16	4			31
3889	051.1					13	3			24
4023	051.9					5	3			13
4157	052.7					5	5			15
4292	053.5					4	4	0		14
4426	054.2					9	5	6		32
4560	055.0					14	9	1		37
4694	055.8					14	9	3		40
4828	056.5					8	16	1		39
4962	057.3					3	*17	*13	0	52
5096	058.1					5	13	9	3	46
5230	058.8					0	12	6	4	35
5364	059.6						6	1	5	18
5499	060.4						4	0	*3	10
5633	061.1						0		3	4
5767	061.9								1	2
5901	062.7								1	1
6035	063.4								2	3
6169	064.2								0	0
6303	065.0								1	1
6437	065.7								2	3
6571	066.5								0	0
CIC		0	401	192	209	759	468	141	92	
Peak		0	11	23	28	55	18	15	9	
Pass		8	7	6	5	4	1	2	3	

Keystone #166
22 July 1968
0719-0747 EST

Arc 16.0 km
Ref Pt 058°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 240	310	370	435	488	580	670	VIC
0	045.5		0	0					0
134	046.0		4	4					14
268	046.5		4	4					14
402	047.0		4	5					14
536	047.4		2	8					17
671	047.9	0	0	10	0				16
805	048.4	1	8	10	1				35
939	048.9	1	7	8	2				31
1073	049.4	0	6	15	3				41
1207	049.8	0	9	*17	3				51
1341	050.3	*1	*12	16	14				73
1475	050.8	0	7	14	24				74
1609	051.3	1	7	14	18				66
1743	051.8	1	7	8	23				63
1878	052.2	1	9	6	31				77
2012	052.7	0	8	13	26				77
2146	053.2	1	4	15	23				70
2280	053.7	1	0	5	28				54
2414	054.2	0		3	*33				58
2548	054.6			0	26				41
2682	055.1				18				28
2816	055.6				20				31
2950	056.1				25				40
3085	056.6				15				24
3219	057.0				13				21
3353	057.5				13				21
3487	058.0				13				20
3621	058.5				11				17
3755	059.0				5				9
3889	059.4				9				14
4023	059.9				4				6
4157	060.4				0				0
4292	060.9								0
4426	061.4					0			0
4560	061.8					3			5
4694	062.3					8			16
4828	062.8					8	0		16
4962	063.3					10	3		25
5096	063.8					16	10	0	56
5230	064.2					16	19	0	79
5364	064.7					13	13	0	57
5499	065.2					17	4	0	43
5633	065.7					22	21	0	94
5767	066.2					*32	12	0	91
5901	066.6					27	19	0	98
6035	067.1					24	*23	0	101
6169	067.6					11	10	0	47
6303	068.1					13	7	0	42
6437	068.6					25	9	0	72
6571	069.0					18	12	0	64
6706	069.5					19	12	0	64
6840	070.0					14	10	0	52
6974	070.5					3	4	0	17
7108	071.0					6	0	0	12
7242	071.4					6		0	12
7376	071.9					3		0	6
7510	072.4					0		0	0
CIC		35	356	627	1439	1128	478	0	
Peak		3	14	20	35	35	27	0	
Pass		4	3	2	1	5	6	7	

Keystone #167
16 October 1968
0738-0748 EST

Arc 4.0 km
Ref Pt 355°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 362	398	420	484	544	VIC
0	341.6	0					0
134	343.5	1					1
268	345.4	*0					0
402	347.3				0		0
536	349.2		0	0	18		31
671	351.2		1	3	31		56
805	353.1		13	13	*66		133
939	355.0		22	37	75	0	184
1073	356.9		*29	*51	29	5	136
1207	358.8		13	42	0	7	69
1341	000.8		7	14		*14	43
1475	002.7		0	0		6	9
1609	004.6					0	0
CIC		4	301	570	785	111	
Peak		5	35	57	87	22	
Pass		4	5	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #168 — Arc 10.0 km
16 October 1968 — Ref Pt 354°
0751-0824 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 335	372	433	483	516	550	VIC
0	351.7			0				0
134	352.5			12				17
268	353.2			24				36
402	354.0		0	36				53
536	354.8		10	47				84
671	355.5		17	*50				96
805	356.3		*25	32				81
939	357.1		24	14	0			52
1073	357.8		20	5	2		0	35
1207	358.6	0	10	17	28	0	0	70
1341	359.4	5	5	20	57	2	0	104
1475	000.1	9	0	0	74	*6	0	96
1609	000.9	18			*87	7	0	120
1743	001.7	*18			65	6	0	95
1878	002.5	14			40	3	0	62
2012	003.2	8			25	0	0	36
2146	004.0	7			14		0	22
2280	004.8	0			0		0	0
CIC		285	401	918	1402	86	0	
Peak		25	30	59	94	9	0	
Pass		6	5	1	2	4	3	

Keystone #169 — Arc 16.0 km
16 October 1968 — Ref Pt 001°
0828-0840 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 332	367	420	497	VIC
0	355.7		0			0
134	356.2	0	8			10
268	356.7	2	12			16
402	357.2	1	19			24
536	357.6	1	*25			30
671	358.1	5	23			31
805	358.6	9	21			33
939	359.1	9	14	0		25
1073	359.6	*12	11	3		30
1207	000.0	9	5	7		27
1341	000.5	6	2	10		25
1475	001.0	4	3	6		17
1609	001.5	2	0	7		13
1743	002.0	2		15		28
1878	002.4	0		18		31
2012	002.9			27		47
2146	003.4			33		58
2280	003.9			36		63
2414	004.4			*36		62
2548	004.8			23		39
2682	005.3			13		22
2816	005.8			7		12
2950	006.3			0	0	0
3085	006.8				1	3
3219	007.2				*5	10
3353	007.7				6	13
3487	008.2				3	6
3621	008.7				0	0
CIC		223	508	861	53	
Peak		15	29	41	8	
Pass		4	3	2	1	

Keystone #170 — Arc 4.0 km
17 October 1968 — Ref Pt 355°
0821-0832 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 370	435	477	530	555	VIC
0	337.7		0				0
134	339.6		3				5
268	341.6		13				18
402	343.5	0	9				13
536	345.4	7	12				29
671	347.3	3	5	0			13
805	349.2	*7	8	6			31
939	351.2	1	*14	23			51
1073	353.1	2	5	37		0	58
1207	355.0	2	0	40		0	54
1341	356.9	0		*54		0	68
1475	358.8			35	0	0	44
1609	000.8			16	*20	0	41
1743	002.7			0	15	0	16
1878	004.6				3	0	4
2012	006.5				0	0	0
CIC		83	245	754	137	0	
Peak		10	20	60	27	0	
Pass		5	4	1	3	2	

Keystone #171 — Arc 10.0 km
17 October 1968 — Ref Pt 354°
0838-0900 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 322	382	441	489	552	586	616	VIC
0	334.0		0						0
134	334.8		2						3
268	335.6	0	1						2
402	336.3	1	2						5
536	337.1	1	3						7
671	337.9	1	3						6
805	338.6	3	4						12
939	339.4	*2	4						10
1073	340.2	1	6						12
1207	340.9	0	6						11
1341	341.7	1	5						10
1475	342.5	1	5						9
1609	343.2	0	3						6
1743	344.0	1	3						7
1878	344.8	0	5	0					9
2012	345.5		5	2					12
2146	346.3		*9	5					23
2280	347.1		7	4					17
2414	347.9		7	6					20
2548	348.6		5	7					19
2682	349.4		1	7					12
2816	350.2		2	7					13
2950	350.9		0	9					13
3085	351.7			*12					17
3219	352.5			9	0				13
3353	353.2			4	3				10
3487	354.0			4	4				11
3621	354.8			0	4				6
3755	355.5				1				1
3889	356.3				8				12
4023	357.1				13	0			19
4157	357.8				*16	9	0		35
4292	358.6				13	12	3	0	38
4426	359.4				15	22	3	0	52
4560	000.1				12	39	4	0	71
4694	000.9				10	*39	*3	0	68
4828	001.7				6	21	2	0	38
4962	002.5				3	17	2	0	29
5096	003.2				3	5	2	0	12
5230	004.0				2	0	2	0	5
5364	004.8				2		1	0	4
5499	005.5				4		0	0	7
5633	006.3				4			0	6
5767	007.1				0			0	0
CIC		46	329	273	442	586	77	0	
Peak		5	11	15	17	44	7	0	
Pass		7	6	1	2	3	5	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #172 — Arc 16.0 km
17 October 1968 — Ref Pt 001°
0906-0920 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 442	496	550	575	625	VIC
0	349.0	0					0
134	349.5	2					4
268	350.0	3					5
402	350.4	4					6
536	350.9	4					6
671	351.4	4					6
805	351.9	*5					7
939	352.4	4					5
1073	352.8	5					7
1207	353.3	3					5
1341	353.8	2	0				4
1475	354.3	2	3				7
1609	354.8	0	4				6
1743	355.2	2	8				14
1878	355.7	3	10				18
2012	356.2	0	7				11
2146	356.7		9				13
2280	357.2		10				14
2414	357.6		11				15
2548	358.1		*11				16
2682	358.6		11				16
2816	359.1		10	0			14
2950	359.6		9	2			16
3085	000.0		10	4			18
3219	000.5		5	6			14
3353	001.0		0	8			8
3487	001.5			10		0	11
3621	002.0			*13		0	13
3755	002.4			10	0	0	11
3889	002.9			8	2	0	11
4023	003.4			5	0	0	6
4157	003.9			0	1	0	1
4292	004.4				1	0	1
4426	004.8				0	0	0
4560	005.3				0	0	0
4694	005.8				3	0	3
4828	006.3				*5	0	5
4962	006.8				3	0	3
5096	007.2				1	0	1
5230	007.7				1	0	1
5364	008.2				1		1
5499	008.7				0		0
CIC		158	422	238	71	0	
Peak		7	15	15	8	0	
Pass		5	1	2	4	3	

Keystone #173 — Arc 4.0 km
18 October 1968 — Ref Pt 338°
0634-0643 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 368	426	490	554	600	630	VIC
0	322.6	0		0				0
134	324.6	*5		7				19
268	326.5	8		13				34
402	328.4	2	0	23				43
536	330.3	0	3	*35			0	65
671	332.2		17	18		0	0	60
805	334.2		*16	0		23	0	50
939	336.1		25		0	*89	0	132
1073	338.0		12		12	3	0	39
1207	339.9		2		*57	0	0	87
1341	341.8		0		12		0	17
1475	343.8				0			0
CIC		53	272	343	286	413	0	
Peak		14	32	39	92	95	0	
Pass		6	1	2	3	4	5	

Keystone #174 — Arc 10.0 km
18 October 1968 — Ref Pt 332°
0651-0710 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 296	370	429	471	549	609	631	VIC
0	322.0		0						0
134	322.8	0	3						5
268	323.5	*2	4						11
402	324.3	3	3	0					12
536	325.1	3	3	1					14
671	325.9	0	5	1					10
805	326.6		8	1	0				16
939	327.4		4	6	5				24
1073	328.2		6	8	10				36
1207	328.9		6	8	17				48
1341	329.7		8	9	19				57
1475	330.5		6	9	*27				65
1609	331.2		*6	*9	18				51
1743	332.0		3	6	11				31
1878	332.8		0	0	2				4
2012	333.5		1		0				1
2146	334.3		1			0			2
2280	335.1		0			18			33
2414	335.8					32			60
2548	336.6					50			93
2682	337.4					*57	0		108
2816	338.1					42	9		87
2950	338.9					38	*12		84
3085	339.7					25	9		56
3219	340.5					11	9	0	29
3353	341.2					0	0	*6	3
3487	342.0							0	0
CIC		30	236	212	386	977	137	21	
Peak		5	11	12	29	58	16	8	
Pass		7	6	5	1	2	3	4	

Keystone #175 — Arc 16.0 km
18 October 1968 — Ref Pt 330°
0717-0745 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 304	370	428	490	540	593	650	690	VIC
0	326.2	0	0							0
134	326.6	0	2							3
268	327.1	0	5	0						8
402	327.6	0	5	3						12
536	328.1	0	4	4						13
671	328.6	0	5	*8						20
805	329.0	0	3	7						16
939	329.5	0	4	6						17
1073	330.0	0	3	6						15
1207	330.5	0	3	6						15
1341	331.0	0	3	4	0					11
1475	331.4	0	6	5	4					25
1609	331.9		*5	5	13					35
1743	332.4		2	5	*26					61
1878	332.9		0	2	16					27
2012	333.4			1	22					35
2146	333.8			0	18					27
2280	334.3				6	0				8
2414	334.8				0	3				4
2548	335.3					6				9
2682	335.8					*15				20
2816	336.2					10				13
2950	336.7					6	0			8
3085	337.2					9	5			20
3219	337.7					7	10			24
3353	338.2					5	*16			31
3487	338.6					3	18			38
3621	339.1					0	10	0		15
3755	339.6						14	1		23
3889	340.1						11	1		18
4023	340.6						6	2		12
4157	341.0						0	2		3
4292	341.5							6		7
4426	342.0							8		10
4560	342.5							6		8
4694	343.0							*10		13
4828	343.4							3		3
4962	343.9							0		0
5096	344.4								0	0
5230	344.9								*5	8
5364	345.4								2	2
5499	345.8								1	2
5633	346.3								0	0
5767	346.8									
CIC		0	180	220	378	228	325	140	55	
Peak		0	7	10	26	16	18	14	9	
Pass		8	7	6	1	2	3	4	5	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #176 — Arc 4.0 km
20 October 1968 — Ref Pt 097°
0634-0645 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 304	327	364	410	440	469	VIC
0	085.5					0		0
134	087.4	0				1		1
268	089.3	5				0	0	3
402	091.2	*10				13	*5	20
536	093.2	8				*22	0	22
671	095.1	1				0		1
805	097.0	0	0					0
939	098.9		15	0	0			12
1073	100.8		36	50	*82			167
1207	102.8		91	230	60			389
1341	104.7		*70	*314	23			428
1475	106.6		12	141	0			165
1609	108.5		8	32				42
1743	110.4		0	8				9
1878	112.4			0				0
CIC		86	831	2775	591	128	16	
Peak		14	132	330	174	31	6	
Pass		5	6	4	2	3	1	

Keystone #177 — Arc 10.0 km
20 October 1968 — Ref Pt 097°
0650-0700 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 334	364	410	447	488	VIC
0	093.2				0		0
134	093.9				23	0	19
268	094.7				25	0	20
402	095.5				14	0	11
536	096.2				30	0	23
671	097.0	0			60	0	47
805	097.8	5			53	0	45
939	098.5	5	0		*73	0	60
1073	099.3	5	3		21	0	23
1207	100.1	2	*28	0	0	0	30
1341	100.8	5	0	17		0	23
1475	101.6	6		46		0	56
1609	102.4	16		62		0	82
1743	103.1	*25		202			244
1878	103.9	18		*253			295
2012	104.7	5		240			270
2146	105.5	0		114			127
2280	106.2			27			29
2414	107.0			0			0
CIC		326	111	3445	1075	0	
Peak		28	33	255	85	0	
Pass		5	4	1	3	2	

Keystone #178 — Arc 16.0 km
20 October 1968 — Ref Pt 100°
0704-0721 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 357	392	414	467	532	VIC
0	089.0					0	0
134	089.4					2	4
268	089.9					7	12
402	090.4					15	26
536	090.9					*17	29
671	091.4					10	18
805	091.8					1	2
939	092.3					0	0
1073	092.8						0
1207	093.3						0
1341	093.8						0
1475	094.2						0
1609	094.7	0					1
1743	095.2	1					3
1878	095.7	4					0
2012	096.2	0					3
2146	096.6	3					3
2280	097.1	3					6
2414	097.6	*5	0				7
2548	098.1	4	5	0			8
2682	098.6	1	4	4	0		28
2816	099.0	0	5	10	9		64
2950	099.5	0	17	14	23		91
3085	100.0	1	19	3	46		16
3219	100.5	0	9	1	5		11
3353	101.0	1	7	1	2		33
3487	101.4	0	35	2	3		187
3621	101.9	4	*67	3	*82		115
3755	102.4	0	35	4	53		30
3889	102.9		4	17	6		54
4023	103.4		0	*54	0		15
4157	103.8			15			6
4292	104.3			6			2
4426	104.8			2			0
4560	105.3			0			
CIC		100	736	494	824	188	
Peak		7	68	68	117	17	
Pass		4	5	1	2	3	

Keystone #179 — Arc 4.0 km
21 October 1968 — Ref Pt 144°
0637-0652 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 300	366	421	489	544	595	634	650	680	VIC
0	130.6	0	0								0
134	132.5	0	14								22
268	134.4	0	*72								116
402	136.3	0	23								37
536	138.2	0	0				0			0	0
671	140.2	0		0	0		22		0	0	26
805	142.1			12	20		*16		*121	0	145
939	144.0			*39	*162	0	0		54	0	363
1073	145.9			0	105	113		0	0	0	333
1207	147.8				72	*98		24		0	289
1341	149.8				0	12		*46		0	50
1475	151.7					0		0			0
CIC		0	388	181	1282	785	136	252	628	0	
Peak		0	74	67	173	163	118	86	171	0	
Pass		3	2	1	4	5	6	7	8	9	

Keystone #180 — Arc 10.0 km
21 October 1968 — Ref Pt 146°
0657-0713 EST — SO_2 in ppm

Cum y (m)	Dir (°)	Traverse Height (m) 360	400	420	475	538	590	620	658	VIC
0	135.2	0		0						0
134	136.0	1	0	28						29
268	136.8	1	7	48						54
402	137.6	*4	6	89						97
536	138.3	0	11	*107						116
671	139.1		30	76						101
805	139.9		*52	59	0					100
939	140.6		10	58	58					157
1073	141.4		0	37	101					196
1207	142.2			0	*118		0		0	186
1341	142.9				63		5	0	0	104
1475	143.7				51	0	21	6	0	108
1609	144.5				8	57	*67	*14	0	187
1743	145.2				0	*96	0	0	0	148
1878	146.0					46			0	69
2012	146.8					10				15
2146	147.5					0				0
CIC		22	613	1794	1426	744	330	71	0	
Peak		5	69	109	123	102	73	20	0	
Pass		3	4	2	1	5	6	8	7	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #181 — Arc 16.0 km
21 October 1968 — Ref Pt 149°
0720-0738 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 330	358	408	460	532	597	622	650	VIC
0	132.7	0	0							0
134	133.2	0	6							6
268	133.6	0	9							9
402	134.1	0	7							7
536	134.6	0	6							6
671	135.1	0	2							2
805	135.6	0	3							3
939	136.0	0	9							10
1073	136.6	0	7							7
1207	137.0	0	1							1
1341	137.5	0	0							1
1475	138.0	0	1							1
1609	138.4	0	2	0						2
1743	138.9	0	4	4						9
1878	139.4	0	8	5						13
2012	139.9	0	6	8						17
2146	140.4		3	10						18
2280	140.8		0	6						9
2414	141.3		0	6						9
2548	141.8		*7	3						11
2682	142.3		4	4						9
2816	142.8		0	9						12
2950	143.2			15						21
3085	143.7			82						111
3219	144.2			*103	0					140
3353	144.7			83						115
3487	145.2			15	3	0				25
3621	145.6			17	10	4		0	0	48
3755	146.1			2	21	5	0	*3	*2	81
3889	146.6			0	60	5	3	1	0	112
4023	147.1				*44	8	17	0	1	110
4157	147.6				20	*20	*3		0	73
4292	148.0				5	8	0			23
4426	148.5				0	0				0
CIC		0	294	1332	587	177	83	13	14	
Peak		0	14	119	83	21	25	5	3	
Pass		8	7	6	5	1	2	4	3	

Keystone #182 — Arc 4.0 km
22 October 1968 — Ref Pt 031°
0643-0655 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 293	330	353	397	460	522	554	VIC
0	011.8	0							0
134	013.7	7	0						7
268	015.6	3	1						4
402	017.6	3	25						24
536	019.5	2	39	0	0				34
671	021.4	2	21	9	12				44
805	023.3	2	9	29	35				85
939	025.2	7	32	82	69				205
1073	027.2	7	*0	137	*121				303
1207	029.1	*10		*98	113				260
1341	031.0	7		32	99				178
1475	032.9	5		6	85				132
1609	034.8	0		0	33	0		0	48
1743	036.8				0	39	0	0	66
1878	038.7					*55	30	0	130
2012	040.6					7	*36	0	56
2146	042.5					0	0	0	0
CIC		202	469	1410	2034	363	235	0	
Peak		14	76	165	126	83	65	0	
Pass		6	7	5	1	2	3	4	

Keystone #183 — Arc 10.0 km
22 October 1968 — Ref Pt 027°
0659-0721 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 257	290	370	413	465	535	566	VIC
0	000.9		0						0
134	001.6	0	4						6
268	002.4	0	4						6
402	003.2	0	2						4
536	003.9	0	3						5
671	004.7	0	3						5
805	005.5	0	4						6
939	006.3	0	5						8
1073	007.0	0	7						10
1207	007.8	0	6						10
1341	008.6	0	6						9
1475	009.3	0	9						13
1609	010.1	0	10						14
1743	010.9	0	7						11
1878	011.6	0	10						15
2012	012.4	0	11						16
2146	013.2	0	10						15
2280	013.9	0	12						18
2414	014.7	0	*13						20
2548	015.5	0	11						16
2682	016.2	0	12						18
2816	017.0	0	7						10
2950	017.8	0	9						13
3085	018.5	0	9	0					14
3219	019.3	0	8	25					54
3353	020.1	0	5	33					62
3487	020.9	0	1	46					78
3621	021.6		1	73					122
3755	022.4		0	81					134
3889	023.2			*82	0				135
4023	023.9			53	5				93
4157	024.7			0	22				28
4292	025.5				46				59
4426	026.2				*95				120
4560	027.0				71				89
4694	027.8				62				79
4828	028.5				64				82
4962	029.3				44				56
5096	030.1				10				12
5230	030.8				0	0			0
5364	031.6					1			2
5499	032.4					21			35
5633	033.1					121		0	197
5767	033.9					134	0	*1	220
5901	034.7					*148	1	0	242
6035	035.5					36	*10		71
6169	036.2					10	2		19
6303	037.0					0	0		0
CIC		0	678	1413	1501	1686	44	7	
Peak		0	21	86	96	162	11	3	
Pass		7	6	5	1	2	3	4	

Keystone #184 — Arc 16.0 km
22 October 1968 — Ref Pt 034°
0725-0749 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 270	291	353	417	469	535	562	VIC
0	006.6	0	0						0
134	007.1	0	2						2
268	007.6	0	4						4
402	008.1	0	5						5
536	008.5	0	5						5
671	009.0	0	6						7
805	009.5	0	5						6
939	010.0	0	4						5
1073	010.5	0	3						4
1207	010.9	0	1						1
1341	011.4	0	4						4
1475	011.9	0	1						1
1609	012.4	0	0						0
1743	012.9	0	1						1
1878	013.3	0	0						0
2012	013.8	0	0						0
2146	014.3	0	0						0
2280	014.8	0	3						4

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #184 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 270	291	353	417	469	535	562	VIC
2414	015.3	0	2						2
2548	015.8	0	1						1
2682	016.2		1						1
2816	016.7		2						2
2950	017.2		*5						5
3085	017.7		7						8
3219	018.2		2						2
3353	018.6		0						0
3487	019.1								0
3621	019.6								0
3755	020.1								0
3889	020.6								0
4023	021.0								0
4157	021.5								0
4292	022.0								0
4426	022.5			0					0
4560	023.0			12					19
4694	023.4			6					10
4828	023.9			19					32
4962	024.4			45					76
5096	024.9			59					98
5230	025.4			31					52
5364	025.8			7					12
5499	026.3			20					33
5633	026.8			*121					204
5767	027.3			111	0				187
5901	027.8			54	5				99
6035	028.2			2	32				53
6169	028.7			0	52				80
6303	029.2				69				107
6437	029.7				*159				246
6571	030.2				52				81
6706	030.6				111				172
6840	031.1				73				113
6974	031.6				60				93
7108	032.1				51				80
7242	032.6				15				23
7376	033.0				0	0		0	0
7510	033.5					1	0	0	2
7644	034.0					2	1	0	5
7778	034.5					0	4	0	5
7913	035.0					14	2	0	25
8047	035.4					*35	2	0	59
8181	035.9					22	8	0	46
8315	036.4					6	*30	0	47
8449	036.9					6	13	0	25
8583	037.4					0	6	0	7
8717	037.8						0	0	0
CIC		0	231	1745	2430	314	236	0	
Peak		0	27	150	159	49	31	0	
Pass		7	6	5	1	2	3	4	

Keystone #186 Arc 10.0 km
23 October 1968 Ref Pt 072°
0657-0719 EST SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 240	298	373	422	480	541	600	625	662	VIC
0	058.2	0									0
134	058.9	1									2
268	059.7	1									2
402	060.5	1									1
536	061.2	2									3
671	062.0	*4									6
805	062.8	2	0	0							3
939	063.5	2	2	1							9
1073	064.3	2	2	1							9
1207	065.1	3	3	2	0						14
1341	065.9	2	4	2	2						18
1475	066.6	2	3	4	10						30
1609	067.4	0	*5	6	*11						35
1743	068.2		0	9	8	0					26
1878	068.9		0	*16	8	4					44
2012	069.7		1	11	8	8					44
2146	070.5		0	12	7	21					64
2280	071.2			6	5	20					50
2414	072.0			5	2	*21					46
2548	072.8			7	0	19	0				42
2682	073.5			4		16	1				35
2816	074.3			0		5	2				10
2950	075.1					21	14				57
3085	075.8					16	19	0			55
3219	076.6					11	19	2			50
3353	077.4					0	13	7			28
3487	078.1						35	8	0	0	65
3621	078.9						51	0	3	0	84
3755	079.7						77	0	*22	0	142
3889	080.5						83	1	0	0	135
4023	081.2						68	6	5	0	120
4157	082.0						*79	*26	0	0	156
4292	082.8						28	0		0	46
4426	083.5						8	4		0	18
4560	084.3						0	13			15
4694	085.1							0			0
CIC		77	78	311	218	583	1781	246	109	0	
Peak		5	7	19	12	26	92	27	24	0	
Pass		4	3	2	1	5	6	7	9	8	

Keystone #185 Arc 4.0 km
23 October 1968 Ref Pt 064°
0635-0653 EST SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 180	202	240	303	335	367	420	480	531	615	625	660	VIC
0	050.6	0	0	0										0
134	052.5	2	2	2		0								6
268	054.4	2	5	*10	0	5		0						23
402	056.3	*5	*8	12	2	*16		8						54
536	058.2	0	8	0	2	5		14						34
671	060.2		7		*14	6	0	24						65
805	062.1		0		6	5	*13	*30		0				71
939	064.0				3	0	8	15		21				74
1073	065.9				10		5	0		38			0	87
1207	067.8				2		1		0	*68		0	0	127
1341	069.8				0		0		85	51	0	*24	0	233
1475	071.7								*144	0	*37	29	0	278
1609	073.6								68		22	0	0	129
1743	075.5								14		0		0	21
1878	077.4								0				0	0
CIC		33	107	86	144	128	95	326	1116	636	210	190	0	
Peak		7	13	23	21	22	20	38	150	80	50	72	0	
Pass		6	7	5	4	3	2	1	8	9	10	12	11	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #187 — Arc 16.0 km
23 October 1968 — Ref Pt 075°
0739-0802 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 350	380	435	500	560	620	650	VIC
0	069.2		0	0					0
134	069.7		2	1					4
268	070.2		2	6					11
402	070.7		2	9	0				16
536	071.2	0	2	11	7				31
671	071.6	2	2	9	8				32
805	072.1	3	1	9	1				19
939	072.6	4	3	7	0				18
1073	073.1	2	3	10	0				22
1207	073.6	3	4	12	1				28
1341	074.0	2	5	14	3				35
1475	074.5	2	6	*12	2				31
1609	075.0	3	*7	11	3				32
1743	075.5	5	2	7	5				26
1878	076.0	*5	3	9	4				28
2012	076.4	3	2	6	2				19
2146	076.9	4	4	8	5				30
2280	077.4	2	1	4	7	0			20
2414	077.9	3	0	8	7	7			36
2548	078.4	4		1	10	13			42
2682	078.8	5		0	12	12			43
2816	079.3	4			11	8			35
2950	079.8	0			12	12			38
3085	080.3				5	16			35
3219	080.8				5	21			42
3353	081.2				16	15	0		50
3487	081.7				22	24	7		83
3621	082.2				*24	46	5		119
3755	082.7				24	44	1		112
3889	083.2				11	51	0	0	100
4023	083.6				9	*64	1	0	119
4157	084.1				10	60	0	0	113
4292	084.6				2	48	1	0	81
4426	085.1				0	9	0	0	15
4560	085.6					0	0	0	0
4694	086.0						0	0	0
4828	086.5						0	0	0
4962	087.0						0	0	0
5096	087.5						6	0	7
5230	088.0						5	0	6
5364	088.4						*45	0	54
5499	088.9						16	0	20
5633	089.4						10	0	12
5767	089.9						0	0	0
CIC		204	180	551	809	1611	345	0	
Peak		6	10	17	30	66	47	0	
Pass		7	6	1	2	3	4	5	

Keystone #188 — Arc 4.0 km
24 October 1968 — Ref Pt 314°
0643-0704 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 318	450	480	538	606	670	730	776	840	950	1010	1070	VIC
0	314.0					0								0
134	315.9	0	0			17		0		0				31
268	317.8	*6	*10			60		14		8				187
402	319.8	0	7	0		88		77		*60				419
536	321.7		2	12		*106		81		84			0	516
671	323.6		0	54	0	89		110		13		0	0	405
805	325.5			*120	2	102	0	*114	0	55	0	5	0	622
939	327.4			0	69	0	12	99	57	0	22	*33	0	463
1073	329.4				*180		31	17	22		46	0	0	516
1207	331.3				102		57	0	68		*58		0	496
1341	333.2				22		107		*69		18		0	358
1475	335.1				0		150		0		0		0	249
1609	337.1						*187							310
1743	339.0						115							191
1878	340.9						54							90
2012	342.8						10							17
2146	344.7						12							19
2280	346.7						0							0
CIC		20	70	665	1344	1654	2634	1836	773	789	516	136	0	
Peak		7	18	129	197	120	207	151	117	126	83	39	0	
Pass		4	5	3	2	1	6	7	8	9	10	11	12	

Keystone #189 — Arc 10.0 km
24 October 1968 — Ref Pt 332°
0708-0732 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 495	567	633	696	750	819	870	935	1010	1056	1118	VIC
0	329.7								0				0
134	330.5		0	0					15				28
268	331.2		9	5		0		0	*48				116
402	332.0	0	6	12		9		7	39				130
536	332.8	2	6	18		36		6	32				175
671	333.5	*25	8	25	0	25		21	29				235
805	334.3	23	12	28	7	29		*37	25				276
939	335.1	0	14	25	10	37	0	31	31				253
1073	335.8		12	25	17	55	5	20	25	0	0		268
1207	336.6		12	40	37	*64	27	10	15	2	*10	0	358
1341	337.4		2	24	39	53	33	35	10	12	6	0	348
1475	338.1		*20	*51	46	48	55	20	1	17	5	0	432
1609	338.9		18	10	45	38	*64	13	0	*15	10	0	346
1743	339.7		0	5	44	25	53	7		10	12	0	248
1878	340.5			7	39	7	40	0		14	10	0	187
2012	341.2			2	*48	0	31			8	7	0	153
2146	342.0			12	37		8			2	8	0	106
2280	342.8			0	28		0			0	8	0	55
2414	343.5				14						10		37
2548	344.3				23						0		36
2682	345.1				6								9
2816	345.8				0								0
CIC		181	421	1038	1579	1530	1133	736	976	289	310	0	
Peak		33	28	55	68	70	72	44	59	23	20	0	
Pass		11	10	9	8	7	6	5	1	2	3	4	

Keystone #190 — Arc 16.0 km
24 October 1968 — Ref Pt 348°
0812-0834 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 478	594	715	876	935	1000	VIC
0	324.9	0						0
134	325.4	3	0					11
268	325.9	5	4					29
402	326.4	7	5					36
536	326.9	*7	5					38
671	327.3	2	12					44
805	327.8	2	18					61
939	328.2	3	30					104
1073	328.8	0	10					32
1207	329.3	1	28					91
1341	329.8	0	13					40
1475	330.2	0	17					53
1609	330.7	6	6					38
1743	331.2	4	*32					114
1878	331.7	0	18					57
2012	332.2		12					40
2146	332.6		14					46
2280	333.1		13					40
2414	333.6		12					38
2548	334.1		8					25
2682	334.6		0					1
2816	335.0		1					3
2950	335.5		2					5
3085	336.0		2					6
3219	336.5		0					2
3353	337.0		1					5
3487	337.4		2					5
3621	337.9		3					10
3755	338.4		3					9
3889	338.9		6					19
4023	339.4		3					10
4157	339.8		4					12
4292	340.3		0					0
4426	340.8							0
4560	341.3				0			0
4694	341.8			0	8			24
4828	342.2			6	21			84
4962	342.7			11	18			96
5096	343.2			8	19			85
5230	343.7			17	18	0	0	116

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #190 (continued)

Cum y (m)	Dir (°)	Traverse Height (m) 478	594	715	876	935	1000	VIC
5364	344.2			29	19	1	0	166
5499	344.6			22	18	*2	0	137
5633	345.1			49	19	0	0	239
5767	345.6			*53	22	0	0	264
5901	346.1			52	*26	0	0	275
6035	346.6			37	25	1	0	216
6169	347.0			40	12	1	0	188
6303	347.5			35	0	0	0	133
6437	348.0			22			0	82
6571	348.5			40			0	150
6706	349.0			14				52
6840	349.4			4				16
6974	349.9			0				0
CIC		146	1017	1570	809	21	0	
Peak		9	34	60	28	3	0	
Pass		6	5	1	2	4	3	

Keystone #191 — Arc 4.0 km — Ref Pt 097° — 25 October 1968 — 0746-0804 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 378	424	465	540	596	640	725	785	848	VIC
0	072.0				0						0
134	073.9				1						2
268	075.9				7		0				12
402	077.8				*6		2				14
536	079.7				5		4			0	15
671	081.6		0		0	0	*15		0	0	26
805	083.6		2	0		5	11	0	1	0	30
939	085.5		*4	2		*10	5	3	*6	0	43
1073	087.4	0	3	1		5	2	8	5	0	38
1207	089.3	*1	0	3		0	0	7	0	0	20
1341	091.2	1		*3				*11		0	28
1475	093.2	0		0				2		0	5
1609	095.1							0		0	0
CIC		9	33	30	67	72	137	112	40	0	
Peak		2	5	5	12	11	16	15	9	0	
Pass		9	8	1	2	3	4	5	6	7	

Keystone #192 — Arc 10.0 km — Ref Pt 083° — 25 October 1968 — 0808-0827 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 363	421	468	540	608	664	718	VIC
0	076.1							0	0
134	076.9							13	18
268	077.6							58	83
402	078.4							127	183
536	079.2							*118	170
671	079.9							51	73
805	080.7							46	67
939	081.5				0		0	37	53
1073	082.2				1		5	30	53
1207	083.0				11	0	24	22	94
1341	083.8				17	4	32	16	151
1475	084.5				*23	13	32	3	139
1609	085.3	0			13	18	34	4	126
1743	086.1	1	0		8	*22	42	19	184
1878	086.8	1	2		4	20	47	17	187
2012	087.6	2	3		1	17	*57	20	186
2146	088.4	0	2		0	17	0	19	94
2280	089.1	0	2			13		*27	77
2414	089.9	0	1			4		20	40
2548	090.7	1	0			0		7	12
2682	091.5	1	0					2	5
2816	092.2	1	1					0	-
2950	093.0	1	2						5
3085	093.8	1	*3						6
3219	094.5	1	2						5
3353	095.3	*2	3						7
3487	096.1	2	1						4
3621	096.8	1	0						1
3755	097.6	1							2
3889	098.4	0							0
CIC		57	85	277	457	974	682	2169	
Peak		4	5	25	23	73	29	132	
Pass		7	6	1	2	3	4	5	

Keystone #193 — Arc 16.0 km — Ref Pt 086° — 25 October 1968 — 0832-0844 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 420	600	658	738	VIC
0	073.5			0		0
134	074.0			5		9
268	074.5			*24		45
402	075.0			15		28
536	075.4			19		35
671	075.9			29		54
805	076.4			5		9
939	076.9			10		18
1073	077.4			13		23
1207	077.8			19		35
1341	078.3			20		38
1475	078.8			18		33
1609	079.3			17		31
1743	079.8			22		40
1878	080.2			25		45
2012	080.7			14		26
2146	081.2			5		9
2280	081.7			2		4
2414	082.2	0	0	0	0	0
2548	082.6	2	2		3	21
2682	083.1	2	2		2	22
2816	083.6	3	6		3	40
2950	084.1	4	*18		*7	92
3085	084.6	*4	16		6	82
3219	085.0	2	17		5	73
3353	085.5	2	5		3	29
3487	086.0	2	2		2	21
3621	086.5	2	3		1	23
3755	087.0	2	2		0	15
3889	087.4	2	0			8
4023	087.9	1				6
4157	088.4	2				8
4292	088.9	1				4
4426	089.4	1				5
4560	089.8	2				11
4694	090.3	0				0
4828	090.8	1				5
4962	091.3	1				5
5096	091.8	2				11
5230	092.2	3				13
5364	092.7	0				0
CIC		141	263	936	114	
Peak		6	19	34	8	
Pass		4	1	2	3	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #194 — Arc 4.0 km
26 October 1968 — Ref Pt 123°
0656-0713 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 235	275	305	355	415	475	535	605	634	VIC
0	092.3		0								0
134	094.2		3		0						3
268	096.1		2		2			0			6
402	098.0	0	8		2			2			15
536	099.9	*5	*10	0	13			15			59
671	101.9	0	0	*15	9	0	0	2			34
805	103.8			14	*44	14	47	2	0	0	181
939	105.7			0	8	*36	48	46	*17	0	250
1073	107.6				0	28	7	40	0	0	126
1207	109.6					0	*73	*112		0	311
1341	111.5						10	36		0	79
1475	113.4						0	0		0	0
CIC		16	86	103	281	277	665	918	62	0	
Peak		5	16	23	53	48	81	118	29	0	
Pass		6	5	4	3	2	1	7	8	9	

Keystone #195 — Arc 10.0 km
26 October 1968 — Ref Pt 108°
0717-0732 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 225	301	355	411	475	532	604	VIC
0	097.2	0							0
134	098.0	1							2
268	098.8	2							4
402	099.5	*4							8
536	100.3	2	0						4
671	101.1	1	1		0				4
805	101.9	0	2		2		0		7
939	102.6		*9		2		14		43
1073	103.4		8	0	2		13		40
1207	104.2		6	8	5		27		77
1341	104.9		2	9	2	0	30		72
1475	105.7		1	11	4	9	35		101
1609	106.5		0	*19	10	13	39	0	134
1743	107.2			5	14	23	*38	*5	140
1878	108.0			0	14	*24	33	0	119
2012	108.8				7	25	40		119
2146	109.5				3	18	29		85
2280	110.3				4	21	10		57
2414	111.1				6	14	20		67
2548	111.8				3	12	0		24
2682	112.6				4	0			7
2816	113.4				*18				29
2950	114.1				4				7
3085	114.9				0				0
CIC		39	103	184	376	572	1178	17	
Peak		5	12	19	20	31	49	8	
Pass		7	6	5	4	3	1	2	

Keystone #197 — Arc 4.0 km
29 October 1968 — Ref Pt 102°
1047-1105 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 80	170	232	293	360	410	478	506	VIC
0	082.8						0			0
134	084.7						8			13
268	086.6						8			13
402	088.6	0				0	5	0		8
536	090.5	1				4	10	14	0	45
671	092.4	2		0	0	4	*22	13	3	65
805	094.3	3		1	1	11	14	20	8	81
939	096.2	3	0	4	0	8	8	15	12	68
1073	098.2	*6	1	*3	1	7	14	21	17	93
1207	100.1	2	4	0	1	9	16	22	*28	102
1341	102.0	2	*23		11	*19	0	27	25	152
1475	103.9	1	10		*12	5		18	13	83
1609	105.8	0	5		3	0		*19	5	44
1743	107.8		2		0			6	0	13
1878	109.7		0		10			0		17
2012	111.6				0					0
CIC		72	158	28	141	241	376	627	396	
Peak		8	24	5	16	24	24	32	29	
Pass		8	7	6	5	1	2	3	4	

Keystone #196 — Arc 16.0 km
26 October 1968 — Ref Pt 107°
0738-0802 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 347	390	415	462	539	595	655	VIC
0	089.2	0							0
134	089.7	1							1
268	090.2	1							2
402	090.7	1							1
536	091.2	2							2
671	091.6	2							2
805	092.1	1							1
939	092.6	2	0					0	3
1073	093.1	1	1					1	4
1207	093.6	3	1					1	7
1341	094.0	2	1					1	4
1475	094.5	2	0					1	4
1609	095.0	2	2					2	8
1743	095.5	2	2					2	9
1878	096.0	2	2				0	4	11
2012	096.4	2	2				2	2	11
2146	096.9	2	3				5	2	17
2280	097.4	2	3		0	0	*7	2	20
2414	097.9	2	2		1	1	4	3	21
2548	098.4	2	*2		1	2	3	5	22
2682	098.8	3	2		2	2	5	5	29
2816	099.3	*5	2	0	0	1	4	6	26
2950	099.8	2	1	1	0	1	3	7	25
3085	100.3	1	3	2	3	6	3	7	38
3219	100.8	2	2	3	2	6	5	8	44
3353	101.2	2	0	3	4	5	4	8	39
3487	101.7	0	0	7	4	2	5	6	35
3621	102.2		0	5	7	3	2	7	37
3755	102.7		1	4	*6	8	4	6	45
3889	103.2		0	6	5	*9	2	6	43
4023	103.6			*11	2	3	4	5	33
4157	104.1			9	2	2	6	*8	38
4292	104.6			8	0	3	2	6	26
4426	105.1			5		8	0	5	27
4560	105.6			2		1		2	8
4694	106.0			5		0		2	8
4828	106.5			2				2	6
4962	107.0			0				3	6
5096	107.5							3	4
5230	108.0							0	0
CIC		190	118	270	143	232	261	469	
Peak		6	6	14	8	12	8	9	
Pass		6	7	1	2	3	4	5	

Keystone #198 — Arc 10.0 km
29 October 1968 — Ref Pt 108°
1111-1135 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 160	180	242	300	357	433	480	529	VIC
0	100.3						0		0	0
134	101.1						3		1	6
268	101.9						6		3	13
402	102.6			0			4		2	9
536	103.4	0		1			3		4	12
671	104.2	1		1			5	0	4	16
805	104.9	2		2	0	0	3	2	3	15
939	105.7	3		1	3	1	4	4	3	23
1073	106.5	6		1	4	3	7	0	2	31
1207	107.2	*6	0	1	8	2	7	0	3	36
1341	108.0	4	1	1	7	0	7	5	1	37
1475	108.8	4	2	3	7	1	8	2	2	41
1609	109.5	2	2	5	5	0	*10	3	*4	44
1743	110.3	3	2	5	5	2	3	2	2	36
1878	111.1	4	3	*5	6	4	0	2	2	35
2012	111.8	5	3	3	6	*5	1	6	2	41
2146	112.6	4	*4	1	6	8	0	4	0	35
2280	113.4	0	2	2	8	5		1		28
2414	114.1		1	2	*9	1		5		27
2548	114.9		0	0	7	0		*6		19
2682	115.7				5			4		12
2816	116.5				4			2		9
2950	117.2				1			2		5
3085	118.0				1			3		6
3219	118.8				0			3		4
3353	119.5							1		1
3487	120.3							0		0
CIC		161	71	125	330	117	249	208	145	
Peak		9	6	7	10	10	10	8	6	
Pass		8	7	6	5	1	2	3	4	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #199 — Arc 16.0 km
29 October 1968 — Ref Pt 112°
1140-1153 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 300	369	420	479	VIC
0	105.3			0		0
134	105.8			3		4
268	106.2			3		4
402	106.7	0		5		8
536	107.2	1		5		10
671	107.7	2		3		8
805	108.2	3	0	4	0	12
939	108.6	5	1	4	2	20
1073	109.1	*5	1	2	1	17
1207	109.6	4	1	1	1	13
1341	110.1	4	1	1	1	13
1475	110.6	3	2	1	2	15
1609	111.0	2	2	1	4	15
1743	111.5	1	2	2	3	14
1878	112.0	2	*2	2	*5	18
2012	112.5	0	3	*4	5	18
2146	113.0	1	3	3	4	18
2280	113.4	1	2	3	4	16
2414	113.9	2	2	0	3	13
2548	114.4	0	2	2	2	11
2682	114.9		1	1	3	9
2816	115.4		2	2	2	9
2950	115.8		0	0	1	2
3085	116.3				0	0
CIC		141	100	193	162	
Peak		7	5	7	7	
Pass		4	1	2	3	

Keystone #200 — Arc 4.0 km
30 October 1968 — Ref Pt 123°
0735-0750 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 313	369	420	485	543	558	660	VIC
0	111.5				0				0
134	113.4				46				76
268	115.3	0			167				275
402	117.2	3			*215		0	0	358
536	119.2	*8			166	0	*32	*5	348
671	121.1	0	0	0	69	7	18	0	149
805	123.0		5	84	0	*88	0	0	223
939	124.9		25	46		55		1	165
1073	126.8		*52	*97		69		0	292
1207	128.8		8	35		10			75
1341	130.7		0	0		0			0
CIC		41	322	938	2378	823	181	20	
Peak		9	57	102	290	95	47	6	
Pass		7	6	1	2	4	3	5	

Keystone #202 — Arc 16.0 km
30 October 1968 — Ref Pt 121°
0832-0852 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 482	547	600	660	720	777	830	VIC
0	113.3				0				0
134	113.8				3				5
268	114.3				12				19
402	114.8				7				11
536	115.2	0		0	10				16
671	115.7	0	0	4	17				33
805	116.2	0	5	64	34	0			158
939	116.7	0	27	*80	50	2	0		246
1073	117.2	0	63	65	*62	*25	8		347
1207	117.6	0	*42	70	46	12	*19		291
1341	118.1	0	61	55	17	23	11	0	258
1475	118.6	0	0	44	3	16	6	5	113
1609	119.1	0	4	10	0	21	0	*7	65
1743	119.6		0	0		21		4	38
1878	120.0					16		3	29
2012	120.5					7		0	11
2146	121.0					0			0
CIC		0	722	1398	932	511	159	69	
Peak		0	69	83	70	27	21	8	
Pass		7	1	2	3	4	5	6	

Keystone #201 — Arc 10.0 km
30 October 1968 — Ref Pt 114°
0756-0822 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 375	400	440	500	546	612	660	700	VIC
0	113.2	0	0							0
134	114.0	0	1							1
268	114.8	0	*4							4
402	115.5	0	1			0				1
536	116.3	0	2			10				16
671	117.1	0	0	0		47				70
805	117.8	0		9		*141	0			223
939	118.6			34		60	1			138
1073	119.4			*48		0	4			69
1207	120.1			68			36	0		147
1341	120.9			75	0		89	14		251
1475	121.7			51	37		*119	60	0	372
1609	122.5			0	124		97	*70	0	405
1743	123.2				*137		119	43	0	425
1878	124.0				96		59	45	0	280
2012	124.8				24		13	27	0	86
2146	125.5				8		6	30	0	55
2280	126.3				0		0	5	0	6
2414	127.1							0	0	0
CIC		0	29	1020	1523	923	1943	1057	0	
Peak		0	5	83	139	144	119	71	0	
Pass		7	8	1	2	3	4	5	6	

Keystone #203 — Arc 4.0 km
31 October 1968 — Ref Pt 098°
0841-0916 EST — SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 542	614	660	735	790	843	904	966	1020	1053	VIC
0	080.7	0										0
134	082.6	7		0								13
268	084.6	6		6								21
402	086.5	6		*7			0					22
536	088.4	6	0	2			13					34
671	090.3	7	5	6			22					63
805	092.2	7	6	6			28					74
939	094.2	8	8	6			57					124
1073	096.1	7	9	6	0		37					94
1207	098.0	6	14	6	9		97					206
1341	099.9	7	12	6	28		98				0	238
1475	101.8	7	*17	6	*37		125	0			0	304
1609	103.8	5	16	6	12	0	103	5			0	228
1743	105.7	8	7	2	32	29	104	2			0	290
1878	107.6	14	7	2	0	103	38	0		0	0	248
2012	109.5	16	7	3		*91	38	14		7	0	268
2146	111.4	17	12	3		61	141	17	0	14	0	405
2280	113.4	*17	10	0		12	*152	76	15	*18	0	469
2414	115.3	14	10			0	125	76	8	14	0	387
2548	117.2	8	9				0	132	13	13	0	281
2682	119.1	6	0					162	13	9	0	307
2816	121.1	6						98	112	0	0	346
2950	123.0	2						172	104		0	448
3085	124.9	7						162	43		0	345
3219	126.8	16						*140	*115			440
3353	128.7	14						80	152			394
3487	130.7	14						46	35			156
3621	132.6	14						7	21			70
3755	134.5	16						8	0			45
3889	136.4	10						0				20
4023	138.3	0										0
CIC		999	533	260	421	1058	4214	4284	2258	268	0	
Peak		22	23	8	43	122	178	218	157	22	0	
Pass		1	2	10	3	4	5	6	7	8	9	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #204
31 October 1968
0932-1025 EST

Arc 10.0 km
Ref Pt 115°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 357	481	548	605	660	720	775	835	893	960	1014	VIC
0	086.6				0								0
134	087.3				3								4
268	088.1				6								8
402	088.9				6								9
536	089.6	0			2								3
671	090.4	2			4								12
805	091.2	9			7								39
939	091.7	12			8								52
1073	092.7	11			*10								52
1207	093.5	*10			9								48
1341	094.3	10		0	8								46
1475	095.0	7	0	1	6								35
1609	095.8	10	6	0	6								56
1743	096.6	6	4	0	7	0							42
1878	097.3	7	2	2	3	3			0				40
2012	098.1	8	4	7	6	6			3				73
2145	098.9	6	3	*7	5	6			17				84
2280	099.6	5	4	5	6	3			14				73
2414	100.4	9	5	7	5	4			16				93
2548	101.2	9	4	8	5	7			10				86
2682	101.9	10	3	5	5	7			8				78
2816	102.7	8	2	7	5	8			42				130
2950	103.5	5	2	6	4	9			79				175
3085	104.2	9	0	6	6	*8			96				211
3219	105.0	8	1	1	3	7			83				178
3353	105.8	7	3	5	3	7			30				102
3487	106.5	7	4	3	2	5		0	26				90
3621	107.3	9	4	2	1	6	0	8	47				140
3755	108.1	8	7	1	1	5	3	*18	79				211
3889	108.9	8	*8	0	1	5	7	16	*94				239
4023	109.6	9	6		1	6	11	12	62				186
4157	110.4	9	5		1	6	*11	16	62				194
4292	111.2	5	1		0	6	10	9	45				127
4426	111.9	0	6			5	5	4	6				46
4560	112.7		1			4	5	0	50				96
4694	113.5		0			3	5		59				106
4828	114.2					3	8		30				64
4962	115.0					3	6		18				44
5096	115.8					6	5		18				46
5230	116.5					3	7		34				68
5364	117.3					2	6		44	0	0		82
5499	118.1					0	3		53	5	3		101
5633	118.8						2		33	10	18		101
5767	119.6						0		12	17	*36		105
5901	120.4								9	19	18		75
6035	121.1								5	35	19		97
6169	121.9								9	45	10		107
6303	122.7								10	65	26		167
6437	123.5								9	45	36		148
6571	124.2								3	21	35		96
6706	125.0								1	13	34		77
6840	125.8								3	16	18		62
6974	126.5								5	59	6		115
7108	127.3								8	110	0		197
7242	128.1								7	113			201
7376	128.8								2	*117			198
7510	129.6								0	60			100
7644	130.4									98			164
7778	131.1									95			158
7913	131.9									88			146
8047	132.7									66		0	111
8181	133.4									60		*1	102
8315	134.2									35		0	59
8449	135.0									15			24
8583	135.7									5			9
8717	136.5									3			5
8851	137.3									0			1
8985	138.1									1			2
9120	138.8									7			11
9254	139.6									0			0
CIC		791	303	268	526	524	336	298	4441	4384	927	4	
Peak		14	9	10	12	11	14	21	112	120	45	3	
Pass		11	10	9	8	7	1	2	3	4	5	6	

Keystone #205
1 November 1968
0730-0738 EST

Arc 4.0 km
Ref Pt 074°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 297	320	350	408	440	VIC
0	049.0	0					0
134	050.9	6					4
268	052.9	*8	0				5
402	054.8	0	14				10
536	056.7		34				24
671	058.6		44	0			31
805	060.6		37	7			35
939	062.5		*64	94			156
1073	064.4		17	*229			282
1207	066.3		0	73			86
1341	068.2			0	0		0
1475	070.2				70	0	85
1609	072.1				42	0	50
1743	074.0				23	0	28
1878	075.9				*81	0	97
2012	077.8				57	0	68
2146	079.8				0	0	0
CIC		49	754	1445	976	0	
Peak		13	98	238	199	0	
Pass		4	5	3	1	2	

Keystone #206
1 November 1968
0744-0756 EST

Arc 10.0 km
Ref Pt 062°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 288	315	342	403	440	VIC
0	050.5	0	0				0
134	051.2	0	4				3
268	052.0	0	2				1
402	052.8	0	5				3
536	053.5	0	14				10
671	054.3	0	12				9
805	055.1	0	9				6
939	055.9	0	*20				14
1073	056.6	0	1				1
1207	057.4	0	0	0			0
1341	058.2			8			10
1475	058.9			47			56
1609	059.7			52	0		62
1743	060.5			42	3		53
1878	061.2			45	2		56
2012	062.0			*58	1	0	70
2146	062.8			52	1	0	63
2280	063.5			7	3	0	12
2414	064.3			1	5	0	7
2548	065.1			0	6	0	8
2682	065.8				14	0	18
2816	066.6				29	0	38
2950	067.4				47	0	61
3085	068.1				105	0	137
3219	068.9				128	0	168
3353	069.7				*176	0	230
3487	070.5				171	0	224
3621	071.2				18	0	24
3755	072.0				2	0	2
3889	072.8				0	0	0
CIC		0	237	1120	2546	0	
Peak		0	26	74	191	0	
Pass		4	5	3	1	2	

Table 3 (continued). PLUME CROSS SECTIONS

Keystone #207
1 November 1968
0806-0823 EST

Arc 16.0 km
Ref Pt 065°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 326	343	410	440	465	VIC
0	051.6	0					0
134	052.0	2					1
268	052.5	3					1
402	053.0	2					1
536	053.5	2					0
671	054.0	1					0
805	054.4	1					1
939	054.9	1					0
1073	055.4	1					3
1207	055.9	*6					2
1341	056.4	5					1
1475	056.8	2					0
1609	057.3	1					1
1743	057.8	1					0
1878	058.3	0	0				6
2012	058.8		6				16
2146	059.2		15				13
2280	059.7		11				9
2414	060.2		8				1
2548	060.7		1				3
2682	061.2		2				10
2816	061.6		9				22
2950	062.1		*20				25
3085	062.6		22	0			9
3219	063.1		3	4			11
3353	063.6		5	4			11
3487	064.0		5	4			4
3621	064.5		0	3			6
3755	065.0			5			10
3889	065.5			7			13
4023	066.0			10			6
4157	066.4			5			8
4292	066.9			6			12
4426	067.4			9			12
4560	067.9			9			17
4694	068.4			13			43
4828	068.8			33			82
4962	069.3			63			62
5096	069.8			48	0		95
5230	070.3			70	5		99
5364	070.8			71	9		117
5499	071.2			*90	1		137
5633	071.7			101	7		128
5767	072.2			86	23		9
5901	072.7			0	13		29
6035	073.2				40		47
6169	073.6				63		45
6303	074.1				61		119
6437	074.6				*162		63
6571	075.1				86		9
6706	075.6				12	0	3
6840	076.0				2	*2	1
6974	076.5				0	1	3
7108	077.0				0	4	2
7242	077.5				0	3	2
7376	078.0				0	2	2
7510	078.4				0	2	1
7644	078.9				0	1	17
7778	079.4				23	0	9
7913	079.9				12	1	0
8047	080.4				0	0	2
8181	080.8					2	1
8315	081.3					2	1
8449	081.8					1	1
8583	082.3					0	0
CIC		106	385	2300	1872	84	
Peak		7	24	140	172	6	
Pass		5	4	1	2	3	

Keystone #208
2 November 1968
1030-1054 EST

Arc 4.0 km
Ref Pt 081°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 110	230	290	353	410	460	538	590	656	712	775	820	VIC
								0						0
0	063.7	0	0	0				14						41
134	065.6	0	*5	3				35			0			71
268	067.6	0	1	5		0		36	0		14			108
402	069.5	0	2	3		8		43	6	0	12			125
536	071.4	0	0	*14	0	0		*62	34	5	17			259
671	073.3	0	0	12	24	3	0	15	54	20	26	0		263
805	075.2	0	2	12	*20	9	6	0	49	8	28	5		210
939	077.2		0	0	13	12	19		58	5	*42	15	0	269
1073	079.1				3	*14	33		*90	*19	34	22	*3	347
1207	081.0				0	0	*50		13	0	33	*22	0	116
1341	08219						7		0		0	29		42
1475	084.8						0					10		15
1609	086.8											0		0
1743	088.7													
CIC		0	37	174	216	166	408	733	1083	199	733	370	12	
Peak		0	10	17	37	27	66	74	93	27	48	47	8	
Pass		12	11	10	9	8	7	6	5	1	2	3	4	

Keystone #209
2 November 1968
1100-1140 EST

Arc 10.0 km
Ref Pt 073°
SO_2 in pphm

Cum y (m)	Dir (°)	Traverse Height (m) 70	288	354	410	481	530	595	655	715	774	838	894	VIC
										0		0		0
0	073.8									1		2		5
134	074.5							0	0	4		1		9
268	075.3							1	3	1		1		11
402	076.1				0			0	6	3		1		15
536	076.8				2			1	4	1		2		27
671	077.6				3			3	3	3		*4		34
805	078.4				2			3	0	0		3		38
939	079.1				4			1	1	1		1		39
1073	079.9				5			3	2	3		0		72
1207	080.7				2			3	3	3		1		80
1341	081.5				3			3	2	0		2		101
1475	082.2				1			3	3	1		3		106
1609	083.0				2			3	3	3		3		95
1743	083.8				3			5	5	2		10		106
1878	084.5				5			*8	*8	5		3		153
2012	085.3				2			7	6	4		*11		147
2146	086.1				4			6	5	5		10		111
2280	086.8				5			4	1	2		7		75
2414	087.6				3			3	1	4		5		76
2548	088.4				5			2	1	5		3		48
2682	089.1				3			0	0	4		0		45
2816	089.9				2					5				47
2950	090.7				4					4				22
3085	091.4				3					2				3
3219	092.2				0					0				0
3353	093.0													
CIC		169	197	351	281	287	254	223	296	173	129	111	67	
Peak		10	9	21	11	10	9	10	12	7	9	5	5	
Pass		12	11	10	9	8	7	6	1	2	3	4	5	

GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

Table 4 presents the peak ground-level SO_2 concentrations measured during lengthwise flights under the plume. Each value is the maximum concentration in an interval of one-half kilometer on either side of the designated kilometer. The individual flights are identified by beginning and ending times and locations while the corresponding concentrations are arranged under their respective distances downwind.

Table 5 summarizes the ground-level SO_2 concentrations obtained during crosswind flights under the plume. Although each arc distance from the plant is specified, many of the flights were made at distances corresponding to the cross sections. Each flight is identified by beginning and ending time and a rectangular origin near the plume center. The data are then listed in the plus y and negative y directions with the concentration at the origin repeated for both segments; actual flights, however, were continuous across the plume. Occasionally, only plus y or negative y segments are presented; this occurs if the origin was established outside the plume or if restrictions prevented a complete crosswind flight.

The values shown in this table are instantaneous readings reduced at 6-second intervals. This corresponds to a crosswind distance increment of 107.3 meters for the March and May series (40 mph) and 134.1 meters for the July and October series (50 mph). This change is reflected in the column headings.

In Tables 4 and 5, the SO_2 concentrations are net values obtained by subtracting out the ambient SO_2 and CO_2 background. Completely zero flights are included in both tables to indicate the absence of ground-level concentrations.

Table 4. PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

Symbols

EST	:	Time of beginning and end of each flight.
Begin	:	Location of flight beginning in whole degrees of azimuth and kilometers to nearest tenth from Keystone stacks.
End	:	Location of flight terminus in whole degrees of azimuth and kilometers to nearest tenth from Keystone stacks.
Distance, etc.	:	Successive one-kilometer intervals downwind from plant centered on designated whole kilometer.
SO_2 in pphm	:	Peak SO_2 concentration in whole parts per hundred million per kilometer interval.
-	:	Missing data.

Table 4. PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
							Keystone Plume 14 March 1968																				
0751-0757	118°/ 9.7	118°/ 0.8	0	0	0	0	0	0	0	0	0																
0911-0918	118°/12.9	118°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0													
0936-0941	069°/12.9	069°/ 4.8					0	0	0	0	0	0	0	0													
1039-1042	118°/12.9	118°/ 6.4							0	0	0	0	0	0													
1045-1048	069°/ 6.4	069°/ 0.8	0	0	0	0	0	0																			
							Keystone Plume 15 March 1968																				
0812-0814	026°/16.1	026°/11.3												0	0	0	0	0									
1000-1005	021°/ 9.7	021°/ 4.8					0	0	0	0	0																
1034-1037	021°/ 4.0	021°/ 0.8	0	0	0	0																					
							Keystone Plume 16 March 1968																				
0736-0740	023°/ 9.7	023°/ 4.8					0	0	0	0	0																
0816-0823	023°/ 9.7	023°/ 1.6		0	0	0	0	0	0	0	0																
							Keystone Plume 18 March 1968																				
0812-0817	192°/ 9.7	192°/ 1.6		0	0	0	0	0	0	0	0																
0951-0958	192°/ 4.0	192°/12.1				4	4	5	6	12	7	9	6	6													
1003-1012	192°/11.3	192°/ 1.6		6	13	13	14	22	16	3	10	7	7														
1012-1015	192°/ 1.6	192°/ 6.4		3	3	5	7	5																			
1018-1028	192°/ 6.4	192°/16.1							8	6	10	8	7	10	10	7	7	6									
1033-1038	192°/16.1	192°/ 8.0								11	11	12	10	7	6	5	5	5									
1059-1101	192°/ 1.6	192°/ 4.8		7	2	2																					
1105-1109	192°/ 4.8	192°/ 9.7					8	10	7	5	6																
1109-1115	192°/ 9.7	192°/ 1.6		1	5	5	11	20	24	10	7																
1115-1122	192°/ 1.6	192°/12.9		2	3	2	10	8	11	11	8	7	6	6													
1128-1130	192°/11.3	192°/ 8.0								8	5	5	5														
							Keystone Plume 19 March 1968																				
0751-0756	197°/ 9.7	197°/ 1.6		0	0	0	0	0	0	0	0																
1128-1133	098°/ 9.7	098°/ 0.8	0	0	0	0	0	0	0	0	0																
1218-1223	053°/ 9.7	053°/ 4.8					0	1	0	0	1																

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 20 March 1968																											
0756-0800	042°/16.1	042°/10.5											0	0	0	0	0	0									
0802-0807	042°/ 9.7	042°/ 3.2				0	0	0	0	0	0																
Keystone Plume 25 March 1968																											
0835-0846	067°/16.1	067°/ 1.5		2	2	2	1	0	2	3	2	3	2	3	1	0	2	1									
0920-0922	049°/ 4.0	049°/ 1.6		3	6	12																					
0922-0926	049°/ 1.6	049°/ 6.4		4	4	6	7	9																			
0926-0931	049°/ 6.4	058°/13.7							8	7	7	8	6	6	6												
0936-0941	058°/13.7	049°/ 6.4							8	9	13	9	14	18	8												
0941-0943	049°/ 6.4	049°/ 4.8					4	7																			
1000-1006	059°/16.1	038°/ 9.7										10	13	16	13	16	18	7									
1009-1016	049°/ 9.7	049°/ 1.6		5	11	7	11	16	18	7	7																
1016-1023	049°/ 1.6	049°/12.1		5	5	9	13	12	13	12	14	14	10	9													
1029-1042	049°/16.1	049°/ 1.6		6	14	18	8	4	4	4	3	3	4	8	10	14	4	5									
1110-1121	049°/16.1	049°/ 0.8	42	26	59	13	11	8	14	14	14	17	16	13	11	11	11	11									
1134-1137	049°/ 4.8	049°/ 0.8	2	18	23	28																					
1137-1140	049°/ 0.8	049°/ 4.8	5	4	12	15																					
1140-1143	049°/ 4.8	049°/ 0.8	2	8	14	18																					
1143-1146	049°/ 0.8	049°/ 4.8	2	2	2	16																					
1152-1159	049°/ 0.8	049°/ 9.7	3	10	7	40	18	17	12	9	8																
1204-1213	049°/ 9.7	049°/ 0.8	70	70	14	23	9	4	7	7	10																
1213-1222	049°/ 0.8	049°/16.1	11	40	14	5	13	12	10	2	4	8	9	5	4	4	5	7									
1351-1403	049°/16.1	049°/ 0.8	56	2	8	12	8	8	3	3	5	5	4	4	4	4	6	4									
1403-1405	036°/ 0.8	036°/ 4.0	2	19	74	3																					
1405-1407	036°/ 4.0	036°/ 0.8	2	35	42	2																					
1407-1409	036°/ 0.8	036°/ 4.0	2	19	26	4																					
1410-1412	036°/ 4.0	036°/ 0.8	5	9	25	5																					
Keystone Plume 26 March 1968																											
0731-0737	019°/ 9.7	019°/ 1.6		0	0	0	0	0	0	0	0																
0754-0808	019°/16.1	019°/ 2.4			0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0848-0851	039°/16.1	039°/10.5											0	0	0	0	0	0									
0900-0905	039°/ 8.0	039°/ 0.8	1	1	1	1	0	0	0	0																	
0924-0931	039°/ 9.7	039°/ 0.8	2	2	7	3	5	3	3	2	2																
0931-0940	039°/ 0.8	039°/16.1	3	2	2	2	2	6	3	5	10	10	8	7	6	3	2	2									
0944-0957	039°/16.1	039°/ 0.8	2	3	3	8	10	16	14	8	6	6	6	5	5	3	2	1									
0957-1000	039°/ 0.8	039°/ 6.4	2	2	2	3	3	7																			

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in ppm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 26 March 1968 (continued)																											
1013-1018	039°/ 0.8	039°/ 9.7	10	16	12	6	8	14	13	14	17																
1034-1042	039°/ 0.8	039°/16.1	4	2	2	6	8	7	10	10	14	20	10	6	6	6	6	6									
1042-1055	039°/16.1	039°/ 0.8	4	3	7	14	11	17	11	10	10	8	11	11	8	6	5	4									
1137-1147	039°/ 0.8	039°/19.5	4	2	2	2	3	4	4	4	4	3	3	3	4	4	5	5	5	4	4						
1147-1201	039°/19.5	039°/ 1.6		1	1	2	3	4	9	5	5	4	5	5	7	5	3	3	4	4	3						
Keystone Plume 27 March 1968																											
0812-0822	088°/16.1	088°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0905-0910	088°/16.1	088°/ 9.7										0	0	0	0	0	0	0									
0916-0922	088°/ 9.7	088°/ 0.8	1	1	1	1	1	1	1	1	1																
0922-0929	088°/ 0.8	088°/10.5	2	4	5	4	2	2	7	6	5	5															
0935-0940	088°/10.5	088°/16.1											7	6	6	7	7	8									
0948-0957	088°/12.9	088°/ 0.8	6	8	12	7	7	13	9	6	6	6	5	5													
0957-1000	088°/ 0.8	088°/ 6.4	4	10	12	14	19	17																			
1006-1009	088°/ 5.6	088°/ 1.6		9	12	17	17																				
1009-1014	088°/ 1.6	088°/ 8.8		4	7	13	19	10	17	18									12	10	12	8	8				
1020-1024	088°/12.1	088°/17.7																	9	9	12	12	6				
1027-1039	088°/17.7	088°/ 1.6		9	9	10	13	13	14	14	16	18	13	18													
1039-1042	088°/ 1.6	088°/ 6.4		8	4	9	7	8																			
1100-1110	088°/ 0.8	088°/17.7	1	1	1	1	5	5	1	2	1	1	2	5	2	6	7	7	5								
Keystone Plume 28 March 1968																											
0850-0857	066°/16.1	066°/ 6.4										0	0	0	0	0	0	0	0	0	0						
0903-0908	066°/ 6.4	066°/ 0.8	0	0	0	0	0	0																			
0934-0937	051°/ 9.7	049°/ 6.4										5	7	7													
0937-0942	049°/ 6.4	049°/ 0.8	2	2	2	5	2	9																			
0942-0945	049°/ 0.8	049°/ 4.8	1	0	0	1																					
0949-0951	049°/ 4.8	049°/ 6.4					5	8																			
0951-0959	049°/ 6.4	055°/16.1										5	5	2	2	3	3	2	2	2	1						
1000-1006	055°/16.1	049°/ 6.4										3	2	2	1	4	1	2	1	2	1						
1006-1010	049°/ 6.4	049°/ 0.8	1	3	3	12	14	7																			
1011-1014	049°/ 0.8	049°/ 4.8	0	18	26	2																					
1021-1024	049°/ 0.8	049°/ 6.4	0	0	2	14	8	15																			
1024-1026	049°/ 6.4	051°/ 9.7										9	8	5													
1026-1032	051°/ 9.7	049°/ 6.4										7	5	3													
1032-1035	049°/ 6.4	049°/ 0.8	0	0	13	13	8	4																			

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 28 March 1968 (continued)																											
1046-1050	049°/ 0.8	049°/ 6.4	1	0	0	0	0	2																			
1050-1053	049°/ 6.4	053°/12.9							3	4	9	3	1	2													
1053-1056	053°/12.9	049°/ 6.4							4	2	7	8	4	1													
1056-1059	049°/ 6.4	049°/ 3.2			1	4	3	9																			
Keystone Plume 29 March 1968																											
0739-0743	046°/ 8.8	046°/ 4.0				0	0	0	0	0																	
0817-0830	046°/15.3	046°/ 0.8	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0										
0909-0914	046°/16.1	046°/ 9.7										15	11	9	9	9	9	6									
0917-0921	046°/ 9.7	046°/ 4.8					10	15	13	14	14																
0926-0929	046°/ 4.8	046°/ 0.8	7	9	6	6																					
0929-0936	046°/ 0.8	046°/11.3	10	10	9	9	7	10	15	17	13	11	11														
0940-0944	046°/ 9.7	046°/ 4.8					19	20	15	16	11																
0958-1005	046°/ 4.8	046°/16.1					21	16	14	13	15	11	9	9	10	11	10	10									
1005-1010	046°/16.1	046°/ 9.7										11	11	10	11	10	9	7									
1015-1019	046°/ 9.7	046°/ 4.8					13	17	10	10	11																
1021-1025	046°/ 4.8	046°/ 0.8	9	7	11	9																					
1025-1028	046°/ 0.8	046°/ 4.8	9	11	9	7																					
1048-1051	046°/ 4.8	046°/ 9.7					10	13	14	14	14																
1051-1058	046°/ 9.7	046°/ 0.8	11	9	19	16	16	16	9	11	14																
1058-1101	046°/ 0.8	046°/ 4.8	10	23	13	9																					
1101-1105	046°/ 4.8	046°/ 0.8	9	25	14	15																					
Keystone Plume 30 March 1968																											
0830-0839	183°/16.1	183°/ 1.6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0929-0940	174°/ 0.8	174°/17.7	1	1	1	1	1	1	2	2	1	5	2	8	7	7	17	11	11								
0945-0948	174°/17.7	174°/12.9													8	11	12	8	6								
0951-1000	174°/12.9	174°/ 1.6		2	3	5	2	3	5	3	7	7	10	13													
1002-1004	174°/ 1.6	174°/ 4.8		8	2	2																					
1006-1008	174°/ 4.8	174°/ 6.4					11	7																			
1013-1021	174°/ 6.4	174°/19.5							6	6	3	7	8	8	7	6	6	3	3	5	3						
1022-1034	174°/19.5	174°/ 4.8					5	6	6	5	5	6	6	6	6	3	3	3	2	1	1						
1037-1040	126°/ 4.8	126°/ 1.6		2	8	12																					
1040-1045	126°/ 1.6	126°/ 6.4		2	11	11	7	2																			
1102-1106	126°/ 0.8	126°/ 4.8	29	16	13	10																					

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 30 March 1968 (continued)																									
1106-1110	126°/ 4.8	126°/ 0.8	40	27	11	7																			
1110-1114	126°/ 0.8	126°/ 6.4	31	31	21	11	8	6																	
1114-1117	126°/ 6.4	126°/ 0.8	8	24	17	10	8	6																	
1117-1120	126°/ 0.8	126°/ 6.4	31	17	12	11	11	5																	
Keystone Plume 1 April 1968																									
0801-0810	126°/11.3	126°/ 1.6		4	3	18	25	2	7	6	2	1	3												
0819-0820	126°/ 4.0	126°/ 5.8				47	65																		
0820-0825	126°/ 5.8	126°/ 0.8	3	2	10	12	22																		
0825-0832	126°/ 0.8	126°/12.9	1	1	32	26	14	19	18	10	17	15	5	0											
0910-0920	126°/12.9	126°/ 0.8	5	10	18	5	6	14	7	4	2	2	2	3											
0920-0922	126°/ 0.8	126°/ 4.8	3	3	8	17	28																		
0926-0929	126°/ 4.8	126°/ 9.7					21	7	13	15	15														
0934-0939	126°/ 9.7	126°/17.7										11	6	7	7	3	3	3	3						
0942-0953	126°/17.7	126°/ 4.8					7	4	6	5	3	3	2	2	3	2	4	3	2						
1003-1009	126°/ 0.8	126°/12.9	3	3	4	1	16	5	7	10	8	10	7	4	3										
1009-1016	126°/12.9	126°/ 4.8					2	9	11	3	10	5	4	4	4										
1020-1022	126°/ 4.8	126°/ 1.6		4	22	46	8																		
1022-1025	126°/ 1.6	126°/ 4.8		3	8	21	23																		
1153-1203	126°/12.9	126°/ 0.8	10	92	26	12	30	17	6	6	6	8	7	10	7										
1215-1220	126°/ 0.8	126°/ 9.7	6	4	4	6	16	18	24	5	5														
1220-1228	126°/ 9.7	126°/ 0.8	5	10	5	8	5	7	10	8	4														
1228-1230	126°/ 0.8	126°/ 3.2	6	5	83																				
1233-1236	126°/ 3.2	126°/ 9.7			14	17	21	11	7	7	7														
1239-1241	126°/ 9.7	126°/12.9										5	7	5	5										
Keystone Plume 2 April 1968																									
0814-0819	065°/ 9.7	065°/ 4.0				0	0	0	0	0	0														
0831-0834	065°/ 0.8	065°/ 4.0	0	0	0	0																			
Keystone Plume 3 April 1968																									
0824-0834	041°/16.1	041°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
0938-0941	034°/ 9.7	034°/ 4.8					1	0	0	0	0														
0944-0947	034°/ 4.8	034°/ 0.8	0	0	1	2																			
1008-1012	022°/ 9.7	022°/ 4.8					1	1	4	5	5														

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 3 April 1968 (continued)																									
1016-1025	022°/ 3.2	022°/16.1				0	0	1	1	0	1	2	1	5	7	5	2	1							
1025-1031	022°/16.1	022°/ 8.0								0	2	1	1	2	4	4	1	2							
1034-1036	014°/ 8.0	014°/ 4.8					2	1	0	0															
1039-1042	014°/ 4.8	014°/ 0.8	0	0	10	2																			
1042-1052	014°/ 0.8	014°/14.5	0	0	0	7	11	10	9	7	9	11	0	1	2	1									
1057-1105	014°/14.5	014°/ 0.8	0	0	2	0	2	2	2	2	4	5	5	6	4	4									
1118-1120	001°/ 0.8	001°/ 4.8	0	2	15	15																			
1124-1126	001°/ 4.8	001°/ 8.0					7	11	0	0															
1126-1131	001°/ 8.0	001°/ 0.8	73	5	0	0	0	0	0	0															
1131-1133	340°/ 0.8	340°/ 3.2	2	44	9																				
1133-1135	340°/ 3.2	340°/ 0.8	9	23	5																				
1135-1137	340°/ 0.8	340°/ 3.2	0	10	11																				
1137-1139	340°/ 3.2	340°/ 0.8	25	9	9																				
Keystone Plume 4 April 1968																									
0721-0724	033°/ 4.0	033°/ 0.8	1	2	5	1																			
0725-0728	033°/ 0.8	033°/ 4.8	2	0	0	0																			
0749-0754	033°/ 9.7	033°/ 4.8					0	0	4	3	4														
0810-0814	033°/ 4.0	033°/ 0.8	0	0	0	0																			
Keystone Plume 5 May 1968																									
0719-0733	232°/16.1	232°/ 1.6		0	0	0	0	0	0	0	0	0	0	1	1	1	3	4							
0906-0909	223°/ 4.0	223°/ 1.6		4	10	1																			
0909-0915	223°/ 1.6	223°/11.3		0	10	11	20	13	15	7	6	6	1												
0923-0933	223°/16.1	223°/ 4.8					0	2	0	5	6	6	5	0	1	4	2	4							
0936-0939	223°/ 4.8	223°/ 0.8	0	0	11	0																			
Keystone Plume 6 May 1968																									
0742-0746	162°/ 9.7	162°/ 4.8					0	2	1	1	1														
0806-0809	162°/ 4.0	162°/ 1.6		1	5	1																			
0809-0816	162°/ 1.6	162°/11.3		0	1	2	2	0	0	1	0	0	0												
0832-0844	162°/12.9	162°/ 1.6		3	6	6	6	2	5	5	6	5	7	9	5										
0856-0858	162°/ 1.6	162°/ 4.0		2	5	5																			
0903-0911	162°/ 4.0	162°/12.9				2	10	6	7	7	7	11	6	6	3										

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 6 May 1968 (continued)																											
0919-0923	162°/12.9	162°/19.5																									
0923-0942	162°/19.5	162°/ 1.6		0	0	0	1	0	2	1	2	1	3	3	4 1	5 2	5 5	2 5	3 3	2 3	2 2						
Keystone Plume 7 May 1968																											
0656-0713	229°/25.5	229°/ 1.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0806-0811	229°/ 1.6	229°/ 8.0	0	0	0	0	0	0	0																		
0839-0852	245°/25.7	245°/ 4.8					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0937-0940	253°/ 4.0	253°/ 8.0				7	11	6	2	1																	
0953-1009	253°/19.3	253°/ 1.6		0	5	13	14	11	0	1	0	0	0	0	0	0	0	2	2	2	5						
1009-1013	253°/ 1.6	253°/ 6.4		0	0	10	11	7																			
1013-1017	253°/ 6.4	253°/ 0.8	46	29	28	5	10	6																			
Keystone Plume 8 May 1968																											
0705-0717	345°/16.1	345°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
0820-0828	009°/ 9.7	009°/ 1.6		0	0	0	0	0	0	0	0																
0849-0853	009°/ 4.8	009°/ 0.8	0	5	14	0																					
0853-0900	009°/ 0.8	009°/ 9.7	0	1	11	19	0	0	1	0	2																
0900-0909	009°/ 9.7	009°/ 0.8	0	20	23	10	1	0	4	1	4																
0909-0917	009°/ 0.8	009°/ 9.7	0	0	4	6	1	5	2	4	6																
0923-0927	009°/ 9.7	009°/16.1																									
0933-0948	009°/16.1	009°/ 0.8	2	17	7	21	5	4	11	10	9	4 7	4 7	2 10	2 5	4 6	4 7	2 5									
0948-0951	009°/ 0.8	009°/ 4.8	2	5	42	27																					
0959-1009	009°/ 9.7	009°/ 0.8	2	58	35	32	19	24	21	13	10																
1009-1019	009°/ 0.8	009°/16.1	2	2	6	15	51	13	11	27	21	9	9	7	5	6	6	6									
1019-1031	009°/16.1	009°/ 0.8	5	5	15	11	9	9	4	17	16	10	9	9	9	5	6	6									
1037-1042	009°/ 0.8	009°/ 8.0	1	1	2	9	25	26	10	9																	
Keystone Plume 9 May 1968																											
0606-0609	008°/ 4.0	008°/ 0.8	0	0	0	0																					
0707-0716	015°/16.1	013°/ 8.0																									
0721-0729	020°/ 8.0	020°/ 0.8	0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0	0									
0905-0911	025°/ 9.7	025°/ 3.2				0	0	0	1	2	0																

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 10 May 1968																											
0719-0726	093°/ 9.7	093°/ 1.6		0	0	0	0	0	0	0	0																
0819-0825	100°/16.1	100°/ 9.7										1	0	0	0	0	2										
0829-0832	100°/ 9.7	100°/ 4.8					0	0	0	0	0																
0835-0838	100°/ 4.8	100°/ 1.6		0	0	0																					
0914-0927	109°/16.1	109°/ 1.6		0	1	1	2	6	1	5	7	10	2	3	2	1	1	2									
0956-1005	115°/ 9.7	115°/ 0.8	0	3	2	1	16	2	0	2	10																
1005-1016	115°/ 0.8	115°/16.1	0	5	18	12	9	11	10	9	7	6	9	10	9	9	7	6									
1031-1034	115°/16.1	115°/12.9													5	6	7	6									
1038-1046	115°/12.9	115°/ 4.0				21	9	5	10	12	12	5	5	6													
1048-1052	115°/ 4.0	115°/ 0.8	139	11	10	14																					
1100-1103	115°/ 0.8	115°/ 4.8	0	10	23	35	12																				
1103-1107	115°/ 4.8	115°/ 0.8	1	2	1	10	22																				
1107-1120	115°/ 0.8	115°/16.1	1	23	2	1	6	2	3	1	5	7	5	5	3	5	5	5									
Keystone Plume 11 May 1968																											
0730-0735	014°/16.1	014°/ 8.0								0	0	0	0	0	0	0	0	0									
0744-0751	359°/ 9.7	359°/ 0.8	0	0	0	0	0	0	0	0	0																
Keystone Plume 23 May 1968																											
0654-0701	003°/ 9.7	003°/ 1.6		0	0	0	0	0	0	0	0																
Keystone Plume 25 May 1968																											
1107-1122	---°/24.1	---°/ 4.8					11	9	7	6	10	4	2	4	1	4	2	1	2	3	4	4	4	4	4	1	
1128-1130	---°/ 4.8	---°/ 1.6		0	2	3																					
Keystone Plume 26 May 1968																											
0730-0744	322°/16.1	322°/ 1.6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0856-0904	295°/ 9.7	295°/ 1.6		0	0	0	0	0	0	0	0																
0929-0939	295°/ 9.7	295°/ 0.8	0	0	7	1	0	1	1	2	5																
0939-0948	295°/ 0.8	295°/12.9	0	0	1	0	3	2	2	1	3	6	3	2													
1007-1019	295°/12.9	295°/ 0.8	0	0	2	12	11	9	7	3	3	3	2	2													
1019-1027	295°/ 0.8	295°/11.3	0	0	5	16	1	5	9	7	6	6	2														
1027-1037	295°/11.3	295°/ 1.6		0	9	6	11	9	6	7	6	5	2														

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 27 May 1968																											
0641-0645	287°/ 4.0	287°/ 0.8	0	13	25	13																					
0726-0735	287°/ 9.7	287°/ 0.8	11	15	27	25	19	13	24	20	13																
0735-0743	287°/ 0.8	287°/14.5	0	0	1	6	5	7	9	10	11	11	11	6	5	5											
0749-0802	287°/14.5	287°/ 0.8	6	32	16	7	17	17	5	11	14	11	17	7	6	6											
0936-0944	287°/ 0.8	287°/14.5	1	1	1	1	0	2	5	5	9	7	7	4	5	7											
0947-0950	287°/14.5	287°/20.9															2	4	2	2	2	2					
0955-1004	287°/20.9	287°/ 9.7										0	0	1	1	1	2	2	1	1	2	2					
1010-1015	287°/ 9.7	287°/ 4.8					2	11	6	4	4																
1024-1028	287°/ 4.8	287°/ 0.8	0	2	5	9																					
Keystone Plume 28 May 1968																											
0707-0718	302°/16.1	302°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Keystone Plume 1 June 1968																											
0839-0851	105°/16.1	105°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Keystone Plume 29 June 1968																											
0620-0626	031°/ 9.7	031°/ 1.6		0	0	0	0	0	0	0	0																
0659-0704	037°/16.1	031°/ 9.7										0	0	0	0	0	0	0	0	0	0	0					
0704-0711	031°/ 9.7	031°/ 0.8	0	0	0	0	0	0	0	0	0																
0807-0815	031°/ 9.7	031°/ 0.8	0	5	6	6	0	0	0	1	2																
0827-0835	031°/ 9.7	031°/ 0.8	0	4	0	0	4	0	1	0	0																
0900-0908	031°/ 9.7	031°/ 0.8	1	6	4	8	10	6	4	1	1																
0921-0929	031°/ 9.7	031°/ 0.8	6	10	15	11	16	10	14	6	9																
0943-0945	031°/ 3.2	031°/ 0.8	6	6	6																						
0945-0948	031°/ 0.8	031°/ 4.8	4	4	8	11																					
0951-0954	031°/ 4.8	031°/ 9.7					19	14	9	8	8																
0959-1007	031°/ 9.7	031°/ 0.8	8	6	6	19	20	16	14	13	13																
Keystone Plume 30 June 1968																											
0709-0713	064°/ 9.7	064°/ 3.2				0	0	0	0	0	0																
0751-0803	064°/16.1	064°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
0843-0856	064°/16.1	064°/ 0.8	5	2	3	9	6	3	2	5	2	3	2	4	2	2	2	2	2	2	2	6					

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 1 July 1968																											
0737-0749	075°/16.1	075°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0840-0852	075°/16.1	075°/ 0.8	2	3	2	2	1	1	3	5	1	0	1	0	1	0	3	0									
0916-0920	075°/ 4.0	075°/ 0.8	1	2	6	5																					
0920-0927	075°/ 0.8	075°/12.9	0	6	5	11	6	6	3	2	2	2	3	0													
0934-0938	075°/12.9	075°/19.3													6	3	3	1	1	0	1						
0952-0958	055°/ 6.4	055°/ 0.8	5	2	16	19	8	18																			
0958-1000	055°/ 0.8	055°/ 4.0	1	1	5	6																					
1003-1007	055°/ 4.0	055°/ 9.7					5	5	6	8	3																
1007-1010	055°/ 9.7	067°/16.1										1	1	0	1	3	0	1									
1017-1023	067°/16.1	055°/ 9.7										5	5	3	0	5	0	3									
1023-1031	055°/ 9.7	055°/ 0.8	3	11	24	3	3	5	11	2	0																
Keystone Plume 3 July 1968																											
0810-0820	130°/16.1	130°/ 4.0					0	0	2	2	5	5	7	10	0	0	0	0									
0827-0830	130°/ 4.0	130°/ 1.6		0	4	5																					
0850-0858	130°/ 4.0	130°/16.1				10	11	11	9	7	9	5	7	13	12	7	2	2									
0904-0917	130°/16.1	130°/ 0.8	4	11	9	10	7	16	12	10	10	7	8	7	6	4	4	5									
0917-0921	130°/ 0.8	130°/ 6.4	4	5	10	17	12	5																			
0921-0927	130°/ 6.4	130°/ 0.8	2	10	7	19	10	7																			
0943-0954	130°/ 0.8	130°/16.1	0	0	0	9	7	5	13	21	19	10	12	12	6	6	6	5									
0945-1002	130°/16.1	130°/ 6.4							12	6	16	12	10	10	7	6	5	5									
Keystone Plume 4 July 1968																											
0856-0905	202°/11.3	202°/ 1.6		0	1	1	1	4	4	2	5	0	0														
Keystone Plume 5 July 1968																											
0728-0738	063°/14.5	063°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0											
0859-0911	051°/16.1	051°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0934-0942	044°/ 9.7	044°/ 0.8	7	11	32	14	13	10	1	0	2																
0942-0944	051°/ 0.8	051°/ 4.0	1	4	11	21																					
0948-0952	051°/ 4.0	051°/ 9.7				30	23	10	11	14	7																
0959-1003	051°/ 9.7	051°/16.1										5	9	14	7	7	2	1									
1010-1015	056°/16.1	048°/ 9.7										6	5	7	5	4	4	2									
1015-1022	048°/ 9.7	048°/ 0.8	2	1	5	5	1	2	7	9	5																

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 5 July 1968 (continued)																											
1022-1024	056°/ 0.8	056°/ 4.0	0	0	1	2																					
1027-1030	056°/ 4.0	056°/ 0.8	2	25	6	10																					
1030-1033	056°/ 0.8	056°/ 4.8	3	28	6	6	11																				
1033-1037	056°/ 4.8	056°/ 0.8	0	9	5	7	6																				
Keystone Plume 6 July 1968																											
0734-0743	124°/16.1	124°/ 1.6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0900-0902	148°/ 4.0	148°/ 1.6		3	7	3																					
0902-0909	148°/ 1.6	148°/ 9.7		3	3	6	5	3	6	3	3																
0915-0920	159°/ 9.7	159°/ 4.0				3	5	2	3	3	5																
0924-0927	180°/ 4.0	180°/ 0.8	3	5	7	12																					
0927-0934	180°/ 0.8	180°/ 9.7	3	6	11	13	11	11	8	6	3																
0938-0946	180°/ 9.7	180°/ 0.8	1	3	0	2	1	1	2	5	6																
0949-0951	180°/ 0.8	180°/ 4.0	6	1	1	0																					
0956-1006	180°/ 4.0	180°/17.7				3	3	11	9	12	26	26	18	26	16	11	10	5	2								
1006-1013	180°/17.7	180°/ 9.7										18	20	24	15	6	3	2	3								
1026-1030	180°/ 1.6	180°/ 8.0		3	1	3	12	9	7	7																	
1030-1036	180°/ 8.0	180°/ 0.8	0	1	15	2	5	6	9	7																	
Keystone Plume 8 July 1968																											
0723-0729	028°/ 9.7	028°/ 0.8	0	0	0	0	0	0	0	0	0																
0938-0940	056°/ 4.0	056°/ 0.8	0	1	0	1																					
0947-0952	056°/ 0.8	056°/ 9.7	0	0	1	1	2	10	3	2	2																
0955-1000	073°/ 9.7	073°/ 1.6		1	1	2	0	10	6	20	10																
1010-1013	073°/11.3	073°/16.1												9	16	17	9	14									
1017-1027	073°/16.1	073°/ 1.6		3	1	0	1	1	0	1	1	0	3	7	9	7	14	20									
1038-1048	073°/ 0.8	073°/16.1	6	1	0	0	1	0	0	2	1	1	1	0	1	2	1	1									
Keystone Plume 9 July 1968																											
0640-0645	045°/ 9.7	045°/ 1.6		0	0	0	0	0	0	0	0																
0726-0736	045°/16.1	045°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0828-0832	045°/ 9.7	045°/ 4.0				3	7	13	16	2	6																
0836-0839	045°/ 4.0	045°/ 0.8	0	0	5	2																					
0839-0848	045°/ 0.8	045°/16.1	0	0	1	10	12	3	10	8	12	12	10	7	5	6	5	1									
0852-0856	045°/16.1	045°/ 9.7										7	7	6	3	3	3	2									

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 9 July 1968 (continued)																											
0901-0908	045°/ 9.7	045°/ 0.8	0	0	8	12	3	8	2	3	7																
0923-0927	045°/ 1.6	045°/ 9.7		0	0	0	0	0	2	3	5																
0930-0933	045°/ 9.7	045°/16.1										5	5	5	2	0	0	0									
0933-0942	045°/16.1	045°/ 4.8					0	22	0	7	12	8	11	7	7	2	0	2									
0942-0945	045°/ 4.8	045°/ 9.7					0	11	20	3	3																
0945-0949	045°/ 9.7	045°/ 3.2				0	0	3	7	8	2																
0949-0953	045°/ 3.2	045°/ 9.7				0	2	0	0	2	2																
0953-1000	045°/ 9.7	045°/ 0.8	0	0	0	0	0	0	0	3	6																
Keystone Plume 10 July 1968																											
0709-0715	103°/ 9.7	103°/ 0.8	0	0	0	0	0	0	0	0	0																
0839-0842	052°/ 4.0	052°/ 0.8	0	0	0	0																					
Keystone Plume 14 July 1968																											
0729-0738	030°/16.1	030°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0856-0902	039°/ 9.7	039°/ 0.8	0	0	0	0	0	0	0	0	1																
0902-0907	039°/ 0.8	039°/ 9.7	0	0	0	1	0	0	0	0	0																
0911-0915	039°/ 9.7	039°/ 4.0				2	2	1	3	2	1																
0918-0920	039°/ 4.0	039°/ 0.8	2	2	2	2																					
0920-0925	039°/ 0.8	039°/ 9.7	2	2	2	2	2	2	1	1	3																
0943-0949	039°/ 9.7	039°/ 0.8	2	3	2	3	5	3	3	3	4																
Keystone Plume 17 July 1968																											
0845-0851	100°/ 9.7	100°/ 0.8	0	0	0	0	0	0	0	0	0																
Keystone Plume 19 July 1968																											
0659-0706	075°/16.1	057°/ 4.0					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0706-0709	057°/ 4.0	057°/ 0.8	0	0	0	0																					
0815-0817	057°/ 4.0	057°/ 0.8	0	0	0	0																					
0825-0828	067°/ 9.7	057°/ 4.0					0	0	0	0	0																
0828-0830	057°/ 4.0	057°/ 0.8	0	0	0	0																					

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 21 July 1968																									
0730-0736	290°/ 9.7	290°/ 0.8	0	0	0	0	0	0	0	0	0														
0940-0945	028°/ 9.7	028°/ 0.8	2	4	1	1	2	4	4	21	21														
0945-0948	028°/ 0.8	028°/ 4.8	2	2	2	1																			
0950-0957	028°/ 4.8	028°/16.1					2	2	9	9	7	6	4	2	2	1	1	1							
1002-1010	030°/16.1	057°/ 4.8					13	4	6	3	2	2	4	3	2	1	1	1							
1010-1012	057°/ 4.8	057°/ 0.8	68	37	10	13																			
1012-1014	057°/ 0.8	057°/ 4.8	13	21	23	16																			
1014-1016	057°/ 4.8	057°/ 0.8	13	27	20	11																			
Keystone Plume 22 July 1968																									
0655-0700	029°/ 9.7	029°/ 0.8	0	0	0	0	0	0	0	0	0														
0843-0848	081°/ 9.7	081°/ 0.8	0	0	0	0	0	0	0	0	0														
0919-0924	081°/ 9.7	081°/ 0.8	0	0	0	0	0	0	0	0	0														
0957-1000	081°/ 9.7	081°/ 4.0				0	0	0	0	0	0														
1003-1006	081°/ 4.0	081°/ 0.8	0	0	0	0																			
1019-1028	081°/ 0.8	081°/16.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Keystone Plume 16 October 1968																									
0841-0850	360°/16.1	352°/ 4.0					0	0	0	0	0	0	0	0	0	0	0	0							
0850-0852	352°/ 4.0	352°/ 1.6		0	0	0																			
1021-1023	356°/ 9.7	352°/ 4.8					0	0	0	0	0														
1025-1028	352°/ 4.8	352°/ 0.8	0	0	0	0																			
1049-1052	343°/ 9.7	328°/ 4.8					7	4	4	2	1														
1052-1054	328°/ 4.8	328°/ 0.8	0	4	6	5																			
1054-1100	328°/ 0.8	328°/11.3	0	2	2	4	4	7	9	11	14	9	9												
1100-1107	328°/11.3	328°/ 0.8	2	5	6	4	5	9	12	12	15	10	6												
Keystone Plume 17 October 1968																									
0925-0929	349°/16.1	349°/ 9.7																	0	0	0	0	0	0	0
0933-0939	349°/ 9.7	349°/ 0.8	0	0	0	0	0	0	0	0	0														
1033-1037	332°/ 9.7	326°/ 4.8					4	4	4	0	1														
1042-1045	326°/ 4.8	326°/ 0.8	1	5	19	6																			
1045-1048	326°/ 0.8	326°/ 4.8	0	1	5	11																			
1048-1052	326°/ 4.8	332°/ 9.7					17	11	9	7	5														

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 17 October 1968 (continued)																										
1057-1101	332°/ 9.7	326°/ 4.8					5	9	7	4	4															
1101-1104	326°/ 4.8	326°/ 0.8	1	6	12	16																				
1104-1107	326°/ 0.8	326°/ 4.8	1	0	6	6																				
1107-1112	326°/ 4.8	333°/11.3					12	10	7	5	4	1	0													
1117-1122	332°/ 9.7	326°/ 4.8					7	6	5	4	2															
1122-1126	326°/ 4.8	326°/ 0.8	0	7	2	7																				
1126-1129	326°/ 0.8	326°/ 4.8	0	6	15	2																				
1129-1132	326°/ 4.8	326°/ 0.8	1	6	16	2																				
Keystone Plume 18 October 1968																										
0748-0759	323°/16.1	323°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
0952-0954	323°/ 4.0	323°/ 0.8	0	0	0	0																				
1037-1039	323°/ 4.8	323°/ 0.8	0	0	0	0																				
Keystone Plume 20 October 1968																										
0723-0731	119°/16.1	119°/ 1.6		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								
0933-0942	119°/12.9	119°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0												
1023-1026	119°/ 4.0	119°/ 0.8	1	0	2	4																				
1026-1033	119°/ 0.8	119°/12.9	0	0	1	6	5	4	1	0	4	5	1	0												
1040-1051	100°/12.9	100°/ 0.8	0	7	4	4	7	9	10	9	7	6	12	20												
1051-1111	100°/ 0.8	100°/24.1	0	6	7	12	5	5	6	9	10	10	10	10	11	12	15	10	14	10	4	10	9	9	7	5
1112-1127	100°/24.1	100°/ 4.0				7	10	9	11	9	12	10	7	10	11	7	7	6	7	8	10	8	10	7	7	5
1131-1134	100°/ 4.0	100°/ 0.8	6	7	11	7																				
Keystone Plume 21 October 1968																										
0740-0749	140°/16.1	140°/ 4.8					0	0	0	0	0	0	0	0	0	0	0	0								
0859-0902	117°/ 9.7	117°/ 4.8					0	0	0	0	0															
1002-1004	117°/ 4.0	117°/ 1.6		0	2	10																				
1004-1010	117°/ 1.6	117°/ 9.7		1	0	1	0	1	2	1	4															
1014-1018	117°/ 9.7	117°/16.1										11	12	19	19	19	10	12								
1023-1027	117°/16.1	117°/20.9																	14	14	10	6	4			
1027-1044	117°/20.9	117°/ 0.8	1	6	2	9	10	15	16	10	17	6	6	5	5	10	7	10	10	9	14	7	4			
1044-1052	117°/ 0.8	117°/16.1	0	0	1	11	12	11	16	15	15	16	10	7	7	6	7	9								
1056-1101	117°/16.1	117°/ 9.7										9	10	7	9	7	4	4								

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in ppm																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 21 October 1968 (continued)																											
1105-1111	117°/ 9.7	117°/ 0.8	0	0	1	1	1	1	2	11	35																
1121-1132	117°/ 0.8	117°/19.3	0	0	1	0	0	0	1	0	0	0	0	4	4	4	6	6	7	2	0						
Keystone Plume 22 October 1968																											
0755-0804	009°/16.1	028°/ 4.0				0	0	0	0	0	0	0	0	0	0	0	0	0									
1017-1021	013°/ 9.7	028°/ 4.0				0	0	0	0	0	0																
1041-1044	015°/ 8.0	028°/ 4.0				0	1	2	4	6																	
1044-1046	028°/ 4.0	028°/ 0.8	0	0	0	0																					
1046-1049	028°/ 0.8	028°/ 4.0	1	0	0	0																					
1049-1052	028°/ 4.0	013°/ 9.7				0	0	1	2	4	5																
1055-1059	013°/ 9.7	009°/16.1										5	4	1	0	0	0	0									
1103-1107	009°/16.1	013°/ 9.7										5	6	9	11	9	9	7									
1111-1114	013°/ 9.7	028°/ 4.0				10	15	12	7	5	4																
1117-1120	028°/ 4.0	028°/ 0.8	1	2	6	6																					
1120-1122	028°/ 0.8	028°/ 4.0	1	1	1	2																					
1122-1128	028°/ 4.0	009°/16.1				2	7	52	49	10	14	12	12	14	6	6	2	2									
1130-1138	009°/16.1	028°/ 4.0				10	10	9	7	12	15	9	6	4	1	0	0	0									
1138-1140	028°/ 4.0	028°/ 0.8	2	11	11	10																					
Keystone Plume 23 October 1968																											
0803-0815	079°/16.1	079°/ 0.8	0	0	0	0	1	6	1	1	1	0	1	0	0	1	1	1									
0910-0915	070°/ 9.7	070°/ 0.8	19	2	5	7	4	6	6	6	6																
0922-0925	070°/ 0.8	070°/ 4.0	1	7	10	12																					
0927-0930	070°/ 4.0	070°/ 9.7				7	9	7	5	9	10																
0934-0938	070°/ 9.7	080°/16.1										2	4	1	1	1	1	1									
0944-0949	080°/16.1	070°/ 9.7										1	2	4	4	4	3	4									
0949-0953	070°/ 9.7	070°/ 4.0				2	2	5	2	1	1																
0956-0959	070°/ 4.0	070°/ 0.8	0	0	2	14																					
1051-1056	070°/ 0.8	070°/ 9.7	11	30	1	1	1	2	1	1	11																
1056-1100	070°/ 9.7	080°/16.1										12	7	5	5	5	4	3									
Keystone Plume 24 October 1968																											
0733-0738	334°/ 9.7	334°/ 0.8	0	0	0	0	0	0	0	0	0																
0835-0844	334°/16.1	334°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in ppbm 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 24 October 1968 (continued)																											
1043-1049	309°/ 9.7	309°/ 0.8	0	0	0	2	6	1	0	0	0																
1105-1107	309°/ 0.8	309°/ 4.0	1	0	0	0																					
1109-1113	309°/ 4.0	309°/ 9.7				0	0	0	0	0	0																
1113-1119	309°/ 9.7	309°/ 0.8	1	2	0	0	1	2	4	3	5																
Keystone Plume 26 October 1968																											
0804-0816	100°/16.1	100°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
0917-0921	100°/16.1	100°/12.9													0	0	0	0									
0924-0930	105°/12.9	105°/ 4.0				2	1	0	0	1	1	2	4	9	6												
0933-0936	081°/ 4.0	081°/ 0.8	1	4	11	15																					
0936-0940	081°/ 0.8	081°/ 9.7	0	1	10	31	32	14	5	1	1																
0946-0952	081°/ 9.7	081°/ 1.6		0	1	1	0	1	4	2	1																
0952-0953	092°/ 1.6	092°/ 4.0		0	0	0																					
0957-1002	092°/ 4.0	092°/16.1				1	9	11	1	2	0	0	1	0	0	1	0	0									
1005-1017	092°/16.1	092°/ 0.8	0	1	8	5	0	0	0	0	0	0	0	0	0	0	0	0									
Keystone Plume 29 October 1968																											
1154-1202	112°/16.1	102°/ 4.8					1	4	5	1	4	0	0	1	0	0	1	2									
1202-1205	102°/ 4.8	102°/ 0.8	0	12	10	1																					
1214-1216	102°/ 0.8	102°/ 4.0	1	1	11	15																					
1220-1222	102°/ 4.0	102°/ 1.6		0	6	33																					
1222-1224	102°/ 1.6	102°/ 4.8		0	1	5																					
1224-1228	102°/ 4.8	112°/16.1					4	7	5	7	7	6	4	6	4	2	1	1									
Keystone Plume 30 October 1968																											
0854-0905	117°/16.1	117°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
1006-1010	117°/ 9.7	117°/ 4.0				0	0	0	0	0	0																
1014-1017	117°/ 4.0	117°/ 0.8	0	0	2	6																					
1017-1024	117°/ 0.8	117°/12.9	0	0	0	0	2	6	2	2	1	1	2	1													
1024-1033	117°/12.9	117°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0													
1055-1104	117°/ 0.8	117°/16.1	0	0	2	1	1	1	1	2	1	1	1	1	2	2	3	3									

Table 4 (continued). PEAK GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Begin	End	Distance Downwind From Plant (km) SO_2 in pphm																							
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Keystone Plume 31 October 1968																											
1028-1033	089°/ 9.7	089°/ 0.8	0	0	0	0	0	0	0	0	0																
1134-1138	069°/ 9.7	069°/ 4.0					0	0	1	3	6																
1142-1144	039°/ 4.0	039°/ 0.8	1	5	4	5																					
1205-1208	039°/ 9.7	039°/ 4.0				26	5	6	11	16	14																
1212-1215	039°/ 4.0	039°/ 0.8	17	2	17	19																					
1215-1225	039°/ 0.8	039°/16.1	31	5	2	16	17	11	12	9	10	9	5	9	21	25	12	4									
1232-1244	039°/16.1	039°/ 0.8	4	25	35	5	5	5	10	7	7	4	4	6	10	17	17	6									
1244-1247	039°/ 0.8	039°/ 4.8	1	19	31	15																					
1247-1250	039°/ 4.8	039°/ 0.8	88	4	16	11																					
1250-1253	039°/ 0.8	039°/ 4.0	49	49	9	9																					
1258-1302	039°/ 4.0	039°/ 9.7				5	5	2	1	1	1																
1302-1309	039°/ 9.7	039°/ 0.8	0	4	5	2	3	4	2	0	0																
Keystone Plume 1 November 1968																											
0826-0839	062°/16.1	062°/ 0.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0									
1014-1018	062°/ 9.7	062°/ 4.0				0	0	0	0	0	0																
1023-1026	062°/ 4.0	062°/ 0.8	0	0	0	0																					
1059-1102	062°/ 0.8	062°/ 4.0	0	0	0	0																					
1118-1123	053°/ 9.7	046°/ 4.0				22	1	2	7	7	14																
1125-1128	046°/ 4.0	046°/ 0.8	0	15	10	19																					
1128-1130	046°/ 0.8	046°/ 4.0	0	0	0	4																					
1130-1138	046°/ 4.0	056°/19.3					24	2	4	12	15	19	7	4	7	9	11	12	11	11	9						
1146-1200	055°/16.1	046°/ 4.0					5	17	15	15	14	-	-	4	16	16	9	10									
1200-1202	046°/ 4.0	046°/ 0.8	0	0	0	16																					
1246-1252	055°/16.1	053°/ 9.7										14	14	13	5	7	6	6									
1256-1301	053°/ 9.7	046°/ 4.0				17	43	9	11	10	11																
1303-1306	046°/ 4.0	046°/ 0.8	0	0	1	1																					
1306-1309	046°/ 0.8	046°/ 4.0	0	0	0	0																					
1309-1313	046°/ 4.0	054°/11.3					0	1	7	9	11	11	5														
Keystone Plume 2 November 1968																											
1142-1146	084°/ 9.7	084°/ 3.2				0	0	0	0	2	7																
1234-1238	040°/ 9.7	040°/ 4.0				0	0	0	0	0	0																
1242-1245	054°/ 4.0	054°/ 0.8	0	0	0	0																					

Table 5. INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

Symbols

EST	:	Time of beginning and end of each flight.
Origin	:	Location of rectangular origin in whole degrees of azimuth and kilometers to nearest tenth from Keystone stacks.
Dir	:	+y indicates counterclockwise direction around stacks; -y indicates clockwise direction.
Distance, etc.	:	Cumulative distance across plume from origin in whole meters. Thousands digit is not indicated.
SO_2 in pphm	:	Instantaneous SO_2 concentration in whole parts per hundred million per 6-second flight interval.
-	:	Missing data.

Table 5. INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm: 0	107	215	322	429	537	644	751	858	966	073	180	288	395	502	610	717	824	931	039	146	253	361	468	575	683
Keystone Plume 18 March 1968																												
0947-0951	192°/ 4.0	-y	4	3	5	6	2	0																				
		+y	4	6	1	3	4	1	0																			
0958-1003	192°/12.9	-y	5	5	6	5	2	1	0																			
		+y	5	6	5	5	6	5	5	5	4	4	4	4	4	3	3	3	4	4								
1015-1018	192°/ 6.4	+y	1	6	2	1	1	4	5	3	2	4	5	5	5	4	4	4	3	2	1	1						
1028-1033	192°/16.1	+y	4	5	5	5	5	5	6	6	6	6	6	6	5	5	5	5	5	4	4	3	2					
1101-1105	192°/ 4.8	+y	1	1	1	1	1	1	4	2	1	1	1	1	2	5	2	2	3	4	3	1	1	1	1	1	0	
1122-1125	192°/12.9	+y	2	4	4	4	5	4	4	4	6	6	6	6	6	6	6	7	7	7	7	7	7	6	6	6	4	2
1125-1128	192°/11.3	+y	2	4	6	7	9	6	7	7	12	10	10	10	10	10	9	9	7	7	6	5	6	5	6	6	3	2
Keystone Plume 19 March 1968																												
1213-1218	053°/ 9.7	-y	1	1	1	0	3	5	2	1	0	0	0	1	1	1	1	1										
		+y	1	2	3	2	2	1	1	1	0																	
Keystone Plume 25 March 1968																												
0918-0920	044°/ 4.0	-y	5	6	14	4	1	4	1	2	0																	
		+y	5	2	1	1	1																					
0931-0936	058°/13.7	-y	2	2	2	2	4	6	6	6	5	5	2	2	4	4	4	4	2	5	3	2	1	1	1			
0943-0946	049°/ 4.8	+y	2	2	2	2	2	2	3	4	4	4	3	2	2	2	3	2	2	2	2	2	5	5	9	2	2	
0954-1000	059°/16.1	-y	7	7	6	7	6	6	7	9	6	9	9	7	5	3	1	1	1	1	0							
		+y	7	7	9	9	7	7	8	7	7	9	9	9	8	7	6	6	5	5	5	5	6					
1108-1110	049°/16.1	-y	6	6	6	6	6	6	5	4	4	2	1	0														
1146-1148	049°/ 4.8	-y	5	6	14	16	24	10	9	2	1	1	0															
		+y	2	3	3	1																						
1201-1204	049°/ 9.7	+y	6	6	5	5	5	5	5	5	4	4	5	6	6	9	6	2	3	2	2	0						
		-y	6	6	5	5	6	6	5	5	2	1																
Keystone Plume 26 March 1968																												
1000-1005	039°/ 6.4	+y	6	7	7	7	6	5	5	4	4	2	2	2	1													
		-y	6	6	10	5	10	11	9	7	6	4	2	1	1	1	0											
1020-1023	039°/ 9.7	+y	12	4	6	5	4	4	4	3	2	2	2	2	2	2	2	0										
		-y	12	13	10	9	11	11	10	10	9	8	5	4	4	4	2	1	0									

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm																									
			0	107	215	322	429	537	644	751	858	966	073	180	288	395	502	610	717	824	931	039	146	253	361	468	575	683
Keystone Plume 27 March 1968																												
0912-0914	088°/ 9.7	+y	0	0	0	0	0	0	2	5	4	1	1	1	1	0												
0933-0935	088°/10.5	-y	0	1	1	2	1	1	3	4	3	5	4	3	4	2	2	0										
0945-0948	088°/16.1	+y	0	0	0	0	0	2	4	4	5	5	5	5	5	5	5	5	5	5	4	4	4	4	4	4	3	1
1003-1005	088°/ 6.4	+y	16	12	7	9	6	12	6	4	2	2	0															
		-y	16	21	19	11	5	5	4	2	2	0																
1015-1018	088°/12.1	+y	12	9	7	7	6	7	5	4	2	0																
		-y	12	12	11	11	11	11	11	12	11	11	12	10	6	8	8	2	2	2	0							
1025-1027	088°/17.7	-y	5	5	5	4	4	4	4	3	2	0																
		+y	5	5	5	5	4	4	4	4	3	3	4	3	2	0												
1043-1045	088°/ 6.4	+y	10	7	2	1	0																					
		-y	10	7	14	12	10	6	6	6	6	5	2	2	1	0												
Keystone Plume 28 March 1968																												
0922-0924	049°/ 4.8	-y	5	11	0																							
		+y	5	11	9	4	2	2	2	3	2	2	1	0														
0929-0933	051°/ 9.7	+y	5	5	5	4	4	4	4	2	2	1	0															
		-y	5	5	5	4	4	4	4	4	4	5	5	5	4	3	2	1	0									
0945-0947	049°/ 4.8	+y	5	1	1	3	1	1	0																			
		-y	5	12	4	9	1	1	0	2	11	3	2	0														
Keystone Plume 29 March 1968																												
0915-0917	046°/ 9.7	+y	9	9	9	9	9	8	7	6	7	4	2	0														
		-y	9	9	9	8	8	8	7	6	3	0																
0921-0922	046°/ 4.8	-y	17	9	4	2	0																					
		+y	17	11	10	5	3	0																				
0937-0939	046°/ 9.7	+y	9	9	7	7	6	6	6	5	3	0																
		-y	9	9	9	7	8	7	7	7	6	2	0															
1011-1014	046°/ 9.7	+y	10	11	10	9	8	6	7	6	6	6	5	4	2	0												
		-y	10	9	10	9	9	9	9	9	7	6	5	5	3	1	0											
1019-1021	046°/ 4.8	+y	10	14	9	14	5	0																				
		-y	10	10	5	0																						
Keystone Plume 30 March 1968																												
0942-0944	174°/17.7	-y	4	4	2	2	2	3	3	4	4	4	3	2	3	1	0											
		+y	4	4	4	4	2	1	0																			

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm: 0 107 215 322 429 537 644 751 858 966 073 180 288 395 502 610 717 824 931 039 146 253 361 468 575 683
			Keystone Plume 30 March 1968 (continued)
0949-0951	174°/12.9	+y	5 6 6 7 6 6 9 5 4 2 0
		-y	5 5 4 3 2 0
1000-1002	174°/ 1.6	-y	9 9 12 1 0
		+y	9 10 5 2 0
1004-1006	174°/ 4.8	-y	9 9 11 1 0
		+y	9 7 5 4 2 0
1009-1012	174°/ 6.4	+y	6 6 7 7 9 6 4 5 5 4 7 4 2 0
		-y	6 6 6 5 4 2 0
1034-1036	174°/ 4.8	+y	0 0 5 6 6 6 6 6 6 6 7 9 7 7 10 10 11 6 6 5 5 3 0
			Keystone Plume 1 April 1968
0817-0819	126°/ 4.0	+y	5 5 4 3 3 1 2 2 0
		-y	5 4 3 1 0
0835-0838	126°/12.9	-y	8 7 10 8 7 6 2 0
		+y	8 7 8 6 6 7 4 2 1 0
0923-0925	126°/ 4.8	-y	15 3 3 3 5 4 2 0
		+y	15 27 43 32 10 10 2 1 0
0930-0933	126°/ 9.7	+y	7 10 11 7 5 1 0
		-y	7 9 6 6 5 5 8 8 5 7 7 5 2 1 0
0939-0941	126°/17.7	+y	3 3 3 3 3 3 3 3 3 3
		-y	3 3 3 3 3 3 3 3 3 3
1016-1018	126°/ 4.8	-y	17 7 5 5 2 0
		+y	17 22 12 5 10 9 5 2 0
1231-1232	126°/ 3.2	+y	12 22 17 10 5 5 6 2 0
		-y	12 6 5 5 3 0
			Keystone Plume 3 April 1968
0942-0944	034°/ 4.8	-y	0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0
1005-1007	022°/ 9.7	-y	6 6 6 5 4 3 2 1 0
		+y	6 6 5 4 2 1 0
1012-1014	022°/ 4.8	+y	0 0 0 0 0 0 0
		-y	0 1 1 0 1 0
1036-1038	014°/ 4.8	-y	4 4 3 2 2 3 1 0
		+y	4 4 2 2 1 0

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm 0 107 215 322 429 537 644 751 858 966 073 180 288 395 502 610 717 824 931 039 146 253 361 468 575 683
			Keystone Plume 3 April 1968 (continued)
1121-1123	001°/ 4.8	-y	14 10 6 2 0
		+y	14 10 2 0 4 2 7 1 1 0
			Keystone Plume 5 May 1968
0828-0830	232°/ 4.0	-y	0 0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0 0
0934-0936	232°/ 4.8	-y	0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0
			Keystone Plume 6 May 1968
0733-0735	162°/ 9.7	+y	2 2 1 2 2 2 1 1 0
		-y	2 1 1 4 1 0
0828-0831	162°/12.9	-y	4 4 2 2 1 1 0
		+y	4 5 5 4 4 4 4 3 5 1 1 0
0900-0902	162°/ 4.0	+y	2 4 4 5 5 4 4 4 3 3 2 1 0
		-y	2 7 10 4 3 2 1 0
0913-0916	162°/12.9	+y	7 4 5 5 4 5 4 4 4 5 4 4 2 3 4 6 5 2 0
		-y	7 6 7 7 7 7 7 7 5 6 5 4 4 4 4 4 1 0
			Keystone Plume 7 May 1968
0934-0936	253°/ 4.0	+y	9 2 15 15 12 12 14 11 10 9 6 2 1 0
		-y	9 12 11 5 3 3 1 0
			Keystone Plume 8 May 1968
0815-0818	009°/ 9.7	-y	0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0
0920-0922	009°/ 9.7	-y	6 6 7 4 4 4 5 4 3 1 1 0
		+y	6 5 5 5 5 5 4 4 4 4 4 5 2 2 0
0930-0932	009°/16.1	+y	2 2 2 1 2 1 2 2 2 1 2 2 2 2 1 1 1 1 1 1 0
		-y	2 2 3 5 6 4 5 2 2 1 1 1 1 1 1 1 0

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm 0 107 215 322 429 537 644 751 858 966 073 180 288 395 502 610 717 824 931 039 146 253 361 468 575 683
			Keystone Plume 10 May 1968
0826-0828	100°/ 9.7	+y	0 0 0 0 0 0 0 0
		-y	0 0 0 0 0 0 0 0 0
0832-0834	100°/ 4.8	+y	4 2 0
		-y	4 1 0
1035-1038	115°/12.9	-y	6 6 6 5 5 5 4 4 3 2 1 1 0
		+y	6 6 6 5 5 5 5 4 4 3 2 2 0
1046-1048	115°/ 4.0	+y	2 2 1 6 2 1 0
		-y	2 1 2 2 1 0
			Keystone Plume 25 May 1968
1124-1126	---°/ 4.8	-y	5 6 9 5 12 12 5 0
		+y	5 7 7 10 9 7 5 1 0
			Keystone Plume 26 May 1968
0958-1001	295°/12.9	-y	4 3 2 2 4 2 2 2 1 2 2 1 2 2 2 2 1 1 0
		+y	4 3 2 2 2 2 2 2 2 2 2 2 2 2 3 2 0
			Keystone Plume 27 May 1968
0723-0725	287°/ 9.7	-y	9 10 5 1 0
		+y	9 9 11 15 11 9 10 7 6 5 0
0745-0747	287°/14.5	+y	5 5 5 4 2 1 0
		-y	5 5 5 5 6 6 5 5 4 4 2 2 0
0951-0953	287°/20.9	-y	2 1 1 1 1 1 0
		+y	2 1 2 2 2 2 2 2 1 1 0
1007-1009	287°/ 9.7	+y	1 1 2 3 4 2 1 0
		-y	1 1 1 2 1 1 1 0
1018-1019	287°/ 4.8	+y	5 5 1 0
		-y	5 5 7 5 1 0

Table 5.(continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm																								
			0	134	268	402	536	671	805	939	073	207	341	475	609	743	877	012	146	280	414	548	682	816	950	084	218	353
Keystone Plume 29 June 1968																											
0918-0920	031°/ 9.7	+y	1	1	1	1	0																				
		-y	1	1	1	2	1	1	1	1	2	0	1	1	0												
0949-0950	031°/ 4.8	-y	4	3	2	1	0																				
		+y	4	5	6	5	2	1	0																		
0956-0958	031°/ 9.7	+y	2	2	2	1	2	1	2	2	2	1	1	0													
		-y	2	2	2	2	2	1	1	1	1	1	0														
Keystone Plume 1 July 1968																											
0914-0915	075°/ 4.0	-y	4	2	1	0																					
		+y	4	9	5	5	4	4	3	1	0																
0929-0931	075°/12.9	+y	2	2	6	2	2	2	1	2	1	1	1	0													
		-y	2	1	2	1	1	1	1	1	2	6	1	4	1	0											
0949-0950	055°/ 6.4	-y	4	4	2	1	1	1	1	1	0																
		+y	4	2	2	5	5	3	1	2	1	0															
1001-1002	055°/ 4.0	+y	4	3	0	1	1	0																			
		-y	4	4	5	3	1	0																			
1014-1015	067°/16.1	+y	1	1	2	1	2	1	1	0																	
		-y	1	1	1	1	1	1	0																		
Keystone Plume 3 July 1968																											
0825-0826	130°/ 4.0	+y	6	4	10	6	4	0																			
		-y	6	5	4	2	3	3	2	1	0																
0846-0848	130°/ 4.0	+y	4	4	4	5	4	5	7	7	4	1	0														
		-y	4	6	5	6	5	2	1	0																	
0858-0900	130°/16.1	-y	2	1	1	1	1	1	1	1	2	2	0														
		+y	2	2	2	1	1	0																			
Keystone Plume 5 July 1968																											
0945-0947	051°/ 4.0	+y	14	16	6	5	3	3	0																		
		-y	14	25	33	12	6	7	11	13	4	2	1	0													
0952-0954	051°/ 9.7	+y	20	33	16	15	16	10	6	6	5	5	4	4	1	0											
		-y	20	15	10	19	6	2	0																		
1003-1006	056°/16.1	+y	6	6	6	5	5	5	4	4	5	4	5	4	3	2	2	1	0								
		-y	6	5	5	6	5	4	6	4	4	4	4	3	2	1	0										

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in ppm 0 134 268 402 536 671 805 939 073 207 341 475 609 743 877 012 146 280 414 548 682 816 950 084 218 353
			Keystone Plume 5 July 1968 (continued)
1024-1026	056°/ 4.0	+y	7 6 7 16 10 6 6 5 12 9 6 6 5 1 0
		-y	7 6 5 6 5 4 3 3 1 0
			Keystone Plume 6 July 1968
0857-0859	148°/ 4.0	+y	6 5 4 3 2 1 1 0
		-y	6 7 5 2 1 0
0911-0913	159°/ 9.7	+y	2 1 1 1 2 1 1 1 1 1 0
		-y	2 2 2 2 4 3 4 5 4 2 1 1 1 0
0922-0923	180°/ 4.0	+y	6 4 3 2 2 1 1 1 0
		-y	6 11 5 10 4 1 1 1 1 0
0935-0937	180°/ 9.7	+y	0 0 0 0 0 0 0 0 0 0 0
		-y	0 0 0 0 0 0 0 0 0 0 0
0952-0954	180°/ 4.0	-y	0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0
1014-1016	180°/ 9.7	+y	9 9 7 7 6 5 6 6 6 1 0
		-y	9 9 9 9 7 9 8 10 10 10 10 11 5 1 0
			Keystone Plume 8 July 1968
0935-0936	056°/ 4.0	-y	0 0 0 0 0 0 0 0
		+y	0 0 0 0 0 0 0 0
0952-0953	073°/ 9.7	-y	6 5 10 1 0
		+y	6 6 12 1 1 0
1006-1008	073°/11.3	-y	12 16 2 14 5 11 0
		+y	12 11 9 4 4 5 5 5 5 4 5 4 4 0
1014-1016	073°/16.1	+y	19 15 6 9 9 10 2 0
		-y	19 17 15 12 9 7 4 4 5 4 1 0
			Keystone Plume 9 July 1968
0824-0827	045°/ 9.7	-y	6 6 5 4 5 4 5 5 4 4 3 2 2 1 0
		+y	6 6 6 6 6 7 5 5 4 4 2 1 0
0834-0835	045°/ 4.0	-y	11 14 16 12 6 1 0
		+y	11 3 6 2 0
0856-0858	045°/ 9.7	+y	6 5 5 6 6 6 7 7 5 4 6 3 0
		-y	6 7 9 10 9 10 9 5 2 4 1 0

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm																						
			0	134	268	402	536	671	805	939	073	207	341	475	609	743	877	012	146	280	414	548	682	816	950	084	218	353
Keystone Plume 10 July 1968																												
0836-0838	052°/ 4.0	-y	2	2	2	1	1	1	1	1	0																	
		+y	2	4	2	1	1	1	1	0																		
0916-0918	052°/ 4.0	-y	1	1	1	1	1	1	1	1	1	1	1	0														
		+y	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1											
Keystone Plume 14 July 1968																												
0854-0855	039°/ 9.7	-y	5	4	5	5	2	2	2	2	1	1	1	0														
		+y	5	5	4	4	2	1	1	0																		
0909-0910	039°/ 9.7	-y	5	2	1	2	1	2	1	0																		
		+y	5	2	1	1	1	1	1	1	0																	
0916-0918	039°/ 4.0	-y	2	1	1	2	2	2	1	1	0																	
		+y	2	1	2	1	1	1	2	1	1	0																
Keystone Plume 21 July 1968																												
0937-0938	028°/ 9.7	+y	6	6	6	6	2	0																				
		-y	6	5	5	4	4	0																				
0959-1001	030°/16.1	-y	1	1	1	1	1	1	1	1	1	1	1															
		+y	1	1	1	1	1	1	1	1	1	1	1															
Keystone Plume 22 July 1968																												
0841-0843	081°/ 9.7	+y	0	0	0	0	0	0																				
		-y	0	0	0	0	0	0																				
0907-0910	081°/ 4.0	+y	0	0	0	0	0	0	0	0	0	0	0															
		-y	0	0	0	0	0	0	0	0	0	0	0															
1001-1003	081°/ 4.0	-y	0	0	0	0	0	0	0	0																		
		+y	0	0	0	0	0	0	0	0																		
Keystone Plume 16 October 1968																												
1023-1025	352°/ 4.8	+y	0	0	0	0	0	0																				
		-y	0	0	0	0	0	0																				

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in ppm 0 134 268 402 536 671 805 939 073 207 341 475 609 743 877 012 146 280 414 548 682 816 950 084 218 353
			Keystone Plume 17 October 1968
0930-0931	349°/ 9.7	+y	1 1 1 1 0
		-y	1 1 2 4 2 1 0
1039-1041	326°/ 4.8	-y	6 5 11 2 1 0
		+y	6 5 4 5 6 5 4 3 1 1 1 0
1054-1056	332°/ 9.7	+y	2 2 2 2 4 2 2 2 1 1 0
		-y	2 2 2 2 2 1 2 2 3 2 1 1 0
1113-1115	333°/11.3	+y	1 1 0
		-y	1 2 5 1 1 1 1 1 1 1 1 0
			Keystone Plume 20 October 1968
1034-1038	280°/12.9	+y	11 11 11 11 12 9 8 6 4 3 3 6 2 4 1 2 1 0
		-y	11 11 11 20 22 21 21 12 9 10 7 7 7 7 7 6 10 8 6 5 4 2 0
1128-1130	280°/ 4.0	-y	8 11 5 5 3 2 0
		+y	8 7 7 6 6 3 2 2 1 1 0
			Keystone Plume 21 October 1968
1000-1001	117°/ 4.0	-y	5 11 2 0
		+y	5 1 0
1012-1013	117°/ 9.7	+y	11 14 12 6 2 4 4 5 1 0
		-y	11 10 9 4 2 0
1020-1022	117°/16.1	-y	7 8 8 8 8 7 7 8 7 5 2 0
		+y	7 7 8 5 7 6 7 6 5 4 2 2 0
1054-1055	117°/16.1	-y	5 5 4 4 2 2 2 2 1 0
		+y	5 5 4 2 0
1103-1104	117°/ 9.7	-y	5 6 4 5 5 2 0
		+y	5 6 6 6 7 8 4 0
			Keystone Plume 22 October 1968
1054-1055	013°/ 9.7	+y	6 5 4 2 2 2 2 2 1 0
		-y	6 6 5 4 5 2 1 1 1 0
1100-1101	009°/16.1	-y	5 5 5 5 5 4 2 1 0
		+y	5 5 7 9 8 7 6 2 2 0
1109-1110	013°/ 9.7	-y	5 5 5 4 4 3 2 3 2 1 0
		+y	5 4 4 4 3 3 1 0

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm 0 134 268 402 536 671 805 939 073 207 341 475 609 743 877 012 146 280 414 548 682 816 950 084 218 353
			Keystone Plume 22 October 1968 (continued)
1116-1117	028°/ 4.0	-y	11 14 5 0
		+y	11 14 8 5 2 1 0
			Keystone Plume 23 October 1968
0907-0909	070°/ 9.7	-y	5 6 6 5 2 1 1 0
		+y	5 4 5 6 5 4 2 2 2 2 0
0926-0927	070°/ 4.0	+y	7 11 10 0
		-y	7 7 6 6 4 2 2 0
0931-0933	070°/ 9.7	+y	4 3 4 2 1 0
		-y	4 3 2 4 2 2 2 0
0940-0942	080°/16.1	+y	4 4 5 5 4 5 4 5 4 4 4 2 1 0
		-y	4 4 4 2 3 4 4 5 4 2 1 1 0
0954-0955	070°/ 4.0	-y	5 5 2 2 0
		+y	5 4 4 4 2 0
			Keystone Plume 26 October 1968
0921-0923	105°/12.9	+y	7 8 7 7 5 3 2 2 2 2 2 2 0
		-y	7 7 6 7 6 5 2 2 0
0931-0932	081°/ 4.0	-y	6 4 6 4 1 0
		+y	6 5 4 1 1 0
0941-0942	081°/ 9.7	+y	4 4 3 2 1 0
		-y	4 4 3 2 1 1 0
0955-0956	092°/ 4.0	-y	2 0
		+y	2 1 17 10 0
			Keystone Plume 29 October 1968
1218-1219	102°/ 4.0	+y	4 5 2 1 0
		-y	4 5 5 1 0
			Keystone Plume 30 October 1968
1004-1005	117°/ 9.7	-y	1 1 1 1 0
		+y	1 1 1 1 0
1012-1013	117°/ 4.0	-y	9 1 0
		+y	9 6 1 0

Table 5 (continued). INSTANTANEOUS GROUND-LEVEL SO_2 CONCENTRATIONS - HELICOPTER

EST	Origin	Dir	Distance Across Plume (m) SO_2 in pphm																								
			0	134	268	402	536	671	805	939	073	207	341	475	609	743	877	012	146	280	414	548	682	816	950	084	218	353
Keystone Plume 31 October 1968																											
1130-1133	069°/ 9.7	-y	7	15	4	4	5	6	4	2	2	4	4	4	4	4	4	3	2	0							
		+y	7	5	4	4	2	5	8	7	5	5	6	5	4	4	4	4	2	2	0						
1138-1140	039°/ 4.0	+y	1	2	1	1	1	2	2	2	2	1	0														
		-y	1	4	5	4	2	2	2	2	2	1	1	0													
1159-1202	039°/ 9.7	+y	10	11	11	22	10	15	12	6	2	2	2	2	2	1	2	5	2	1	0						
		-y	10	10	9	9	11	7	6	6	5	4	2	2	2	2	1	0									
1210-1211	039°/ 4.0	-y	15	21	10	5	5	5	4	2	1	0															
		+y	15	17	5	2	1	0																			
1228-1231	039°/17.7	-y	2	2	2	2	4	2	4	5	5	3	4	4	4	5	4	5	4	4	4	3	2	2	3		
		+y	2	2	2	2	3	5	5	5	5	4	4	4	4	3	2	3	2	2							
1255-1257	039°/ 4.0	-y	9	9	4	5	5	6	5	5	3	4	1	0													
		+y	9	7	6	4	5	4	4	4	5	5	4	1	0												
Keystone Plume 1 November 1968																											
1019-1021	062°/ 4.0	-y	0	0	0	0	0	0	0	0	0	0	0														
		+y	0	0	0	0	0	0	0	0	0	0	0														
1115-1117	053°/ 9.7	-y	9	9	11	7	2	0																			
		+y	9	10	10	9	7	6	6	6	2	2	0														
1123-1124	046°/ 4.0	-y	6	24	6	2	0																				
		+y	6	2	1	0																					
1143-1145	055°/16.1	-y	12	12	11	10	9	7	6	6	5	5	5	4	3	1	0										
		+y	12	12	12	12	11	9	7	6	5	4	0														
1243-1245	055°/16.1	-y	6	6	8	6	4	2	2	1	0																
		+y	6	6	4	4	5	4	5	4	2	2	2	1	0												
1253-1255	053°/ 9.7	+y	10	10	10	9	7	5	1	0																	
		-y	10	9	9	9	12	14	14	15	1	0															
1301-1302	046°/ 4.0	-y	5	3	4	2	0																				
		+y	5	7	2	1	0																				
Keystone Plume 2 November 1968																											
1140-1141	084°/ 9.7	-y	5	9	7	4	2	0																			
		+y	5	4	5	9	4	2	0																		

GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

The ground-level SO_2 concentrations measured by portable bubblers are summarized in Table 7. Data are arranged by series day with each bubbler heading containing its identification, coordinates, and height above stack base elevation. Also included in the heading is a three-letter code describing the terrain, vegetation, and ground cover in the vicinity of the sampling site. Descriptions corresponding to this code are presented in Table 6.

Because of occasional malfunctions, some sampling periods were shorter or longer than 30 minutes; this was considered in the reduction, and actual sampling times are listed. Caution should be exercised in interpreting the bubbler concentrations, since no compensation was made for background SO_2 levels.

Table 6. BUBBLER SITE DESCRIPTION

Terrain

A - Ridgetop perpendicular to plume

B - Hillside perpendicular to plume - windward side

C - Hillside perpendicular to plume - leeward side

D - Valley floor perpendicular to plume

E - Ridgetop parallel to plume

F - Hillside parallel to plume

G - Valley floor parallel to plume

H - Flatland

Ground Cover

M - Clear - no trees

N - Trees overhead with leaves

O - Trees overhead without leaves

P - Tall grass or bushes more than 8 inches high

Q - Short grass less than 8 inches high

R - Dirt or sand

S - Rocks

T - Snow

Table 7. AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Symbols

Bubbler heading :
1. Individual bubbler identification.
2. Height in whole meters above stack base elevation (SBE) of bubbler sampling site.
3. Description of terrain, vegetation, and ground-cover in the vicinity of sampling site.
4. Location of bubbler in whole degrees of azimuth and kilometers to nearest tenth from Keystone stacks.

EST : Time of beginning and end of each sample.

pphm : Average SO_2 concentration during sampling period in whole parts per hundred million.

\- : Missing data.

Table 7. AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 15 March 1968

G-36 50 SBE COQ 013/6.9		G-6 00 SBE GMQ 023/7.4		G-25 25 SBE GOQ 025/8.0		G-27 50 SBE GMQ 014/6.1		G-16 25 SBE GMQ 028/8.4		G-8 20 SBE DMQ 032/9.0		G-1 25 SBE DMQ 035/9.6		G-26 30 SBE BMQ 038/10.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0839-09	3	0847-17	5	0852-22	3	0901-37	4	0910-40	3	0915-45	2	0919-49	0	0925-55	7
0909-39	4	0917-47	4	0922-52	4	0937-13	2	0940-10	3	0945-15	3	0949-19	-	0955-25	11
0939-09	3	0947-17	4	0952-22	3	1013-49	2	1010-40	3	1015-45	2	1019-49	5	1025-55	9
1009-39	3	1017-47	5	1022-52	2	1049-25	3	1040-10	4	1045-15	7	1049-19	4	1055-25	7
1039-09	1	1047-17	6	1052-22	2	1125-01	0	1110-40	3	1115-45	4	1119-49	2	1125-55	4
1109-39	3	1117-47	4	1122-52	1			1140-10	2	1145-15	7	1149-19	6	1155-25	9

Keystone Plume 16 March 1968

G-1 5 SBE GMR 017/4.9		G-25 5 SBE GMQ 024/7.4		G-8 20 SBE GOR 025/7.9		G-26 20 SBE DMQ 028/8.4		G-6 10 SBE GMQ 014/6.1		G-16 15 SBE GMQ 013/7.0		G-36 20 SBE COQ 005/7.1		G-27 35 SBE GMQ 003/8.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0834-04	0	0843-13	3	0847-17	1	0853-23	2	0901-31	6	0906-36	3	0911-41	4	0920-50	6
0904-34	0	0913-43	1	0917-47	1	0923-53	1	0931-01	6	0936-06	3	0941-11	3	0950-20	2
0934-04	0	0943-13	1	0947-17	0	0953-23	3	1001-31	3	1006-36	3	1011-41	3	1020-50	3
1004-34	0	1013-43	1	1017-47	0	1023-53	2	1031-01	2	1036-06	3	1041-11	3	1050-20	0

Keystone Plume 18 March 1968

G-26 75 SBE AMQ 206/7.2		G-8 90 SBE AMQ 211/7.3		G-16 80 SBE AMQ 218/7.6		G-36 25 SBE DMQ 215/9.9		G-6 55 SBE FOQ 209/9.1		G-1 35 SBE BMQ 205/8.4		G-27 5 SBE FOQ 199/8.3		G-25 60 SBE FMQ 195/6.9	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0851-21	0	0858-28	0	0908-38	1	0918-48	5	0922-52	3	0929-59	10	0935-05	9	0940-10	-
0921-51	2	0928-58	4	0938-08	1	0948-18	3	0952-22	10	0959-29	7	1005-35	10	1010-40	3
0951-21	0	0958-28	0	1008-38	3	1018-48	4	1022-52	8	1029-59	11	1035-05	9	1040-10	4
1021-51	1	1028-58	0	1038-08	5	1048-18	3	1052-22	7	1059-29	4	1105-35	7	1110-40	-
1051-21	2	1058-28	0	1108-38	4	1118-48	6	1122-52	4	1129-59	7	1135-05	8	1140-10	3
1121-51	0	1128-58	1	1138-08	3	1148-18	9	1152-22	5	1159-29	9	1205-35	4	1210-40	3

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 20 March 1968

G-6 60 SBE BMQ 061/9.9		G-8 80 SBE AMP 056/9.2		G-36 50 SBE DMQ 052/8.6		G-16 50 SBE FMQ 042/7.7		G-1 30 SBE BMQ 037/9.9		G-27 20 SBE BMQ 042/10.5		G-26 40 SBE DMQ 048/10.6		G-25 25 SBE BMQ 053/11.6	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0829-59	0	0833-03	1	0845-15	0	0855-25	3	0908-38	4	0915-45	2	0921-51	4	0926-56	4
0859-29	4	0903-33	2	0915-45	3	0925-55	3	0938-08	4	0945-15	6	0951-21	5	0956-26	5
0929-59	0	0933-03	3	0945-15	1	0955-25	3	1008-38	1	1015-45	3	1021-51	5	1026-56	5
0959-29	0	1003-33	2	1015-45	4	1025-55	3	1038-08	1	1045-15	2	1051-21	5	1056-26	8

Keystone Plume 25 March 1968

G-27 35 SBE BOQ 070/7.0		G-26 100 SBE FMQ 066/9.1		G-25 115 SBE AMP 056/9.2		G-1 65 SBE BMQ 059/9.6		G-16 60 SBE BOQ 061/10.1		G-36 60 SBE COQ 065/10.3		G-8 75 SBE CMQ 069/10.3		G-6 60 SBE FMQ 072/10.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0835-05	9	0843-13	20	0853-23	16	0858-28	7	0904-34	14	0910-40	14	0915-45	9	0922-52	9
0905-35	8	0913-43	25	0923-53	12	0928-58	11	0934-04	16	0940-10	30	0945-15	9	0952-22	9
0935-05	9	0943-13	30	0953-23	15	0958-28	16	1004-34	11	1010-40	21	1015-45	9	1022-52	12
1005-35	10	1013-43	15	1023-53	16	1028-58	11	1034-04	20	1040-10	27	1045-15	9	1052-22	7
1035-05	8	1043-13	24	1053-23	12	1058-28	11	1104-34	14	1110-40	17	1115-45	4	1122-52	10
1105-35	8	1113-43	24	1123-53	8	1128-58	11	1134-04	23	1140-10	23	1145-15	4	1152-22	10

Keystone Plume 26 March 1968

G-36 15 SBE DMQ 034/9.2		G-8 65 SBE CMQ 040/8.3		G-26 25 SBE GNQ 015/7.9		G-25 15 SBE GMQ 014/6.1		G-6 -5 SBE GMQ 023/7.4		G-1 50 SBE BMQ 020/8.8		G-27 30 SBE GMQ 024/9.5		G-16 30 SBE BMQ 038/10.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0828-58	3	0835-05	3	0840-10	8	0847-17	2	0853-23	3	0903-33	2	0913-43	2	0923-53	10
0858-28	3	0905-35	2	0910-40	5	0917-47	2	0923-53	5	0933-03	4	0943-13	4	0953-23	13
0928-58	-	0935-05	-	0940-10	6	0947-17	2	0953-23	3	1003-33	2	1013-43	3	1023-53	10
0958-28	11	1005-35	8	1010-40	10	1017-47	2	1023-53	3	1033-03	2	1043-13	2	1053-23	5
1028-58	6	1035-05	7	1040-10	6	1047-17	3	1053-23	7	1103-33	5	1113-43	4	1123-53	4
1058-28	4	1105-35	6	1110-40	10	1117-47	2	1123-53	8	1133-03	5	1143-13	6	1153-23	4

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 27 March 1968

G-25 55 SBE GOQ 063/9.6		G-26 30 SBE FMQ 064/8.8		G-27 25 SBE GMQ 066/7.9		G-16 15 SBE GMQ 076/7.4		G-1 15 SBE FMQ 075/8.7		G-8 10 SBE FMQ 073/11.0		G-6 25 SBE FMQ 068/12.8		G-36 15 SBE GMQ 063/14.5	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0839-09	5	0843-13	7	0851-21	12	0900-30	10	0905-43	11	0913-43	11	0921-51	25	0928-58	10
0909-39	8	0913-43	3	0921-51	15	0930-00	10	0943-21	14	0943-13	12	0951-21	13	0958-28	15
0939-09	5	0943-13	6	0951-21	12	1000-30	14	1021-59	13	1013-43	19	1021-51	16	1028-58	8
1009-39	4	1013-43	10	1021-51	8	1030-00	15	1059-37	14	1043-13	12	1051-21	23	1058-28	6
1039-09	5	1043-13	10	1051-21	22	1100-30	6			1113-43	8	1121-51	14	1128-58	11
		1113-43	5												

Keystone Plume 28 March 1968

G-26 20 SBE DMQ 081/7.1		G-1 25 SBE FMQ 074/8.8		G-25 60 SBE BMQ 069/10.3		G-16 75 SBE BMP 063/11.4		G-27 105 SBE EMQ 060/13.1		G-6 40 SBE CMP 066/13.5		G-36 25 SBE BMQ 071/13.7		G-8 20 SBE GOQ 077/13.6	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0837-07	8	0846-16	4	0854-24	10	0901-31	6	0911-41	7	0920-50	6	0927-57	5	0933-03	11
0907-37	9	0916-46	4	0924-54	10	0931-01	5	0941-11	6	0950-20	6	0957-27	7	1003-33	5
0937-07	9	0946-16	4	0954-24	9	1001-31	4	1011-41	6	1020-50	6	1027-57	8	1033-03	5
1007-37	9	1016-46	4	1024-54	10	1031-01	5	1041-11	8	1050-20	5	1057-27	5	1103-33	5

Keystone Plume 29 March 1968

G-16 30 SBE BMQ 070/10.0		G-8 60 SBE BOQ 051/7.3		G-1 90 SBE BMQ 055/8.2		G-25 40 SBE BOQ 042/7.6		G-6 80 SBE COS 037/8.7		G-26 30 SBE BMQ 038/10.0		G-27 25 SBE BMQ 049/10.6		G-36 25 SBE BMQ 053/11.5	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0828-58	0	0843-13	8	0852-22	7	0901-31	13	0910-40	12	0919-49	17	0927-57	17	0932-02	11
0858-28	0	0913-43	10	0922-52	10	0931-01	14	0940-10	11	0949-19	17	0957-27	15	1002-32	9
0928-58	3	0943-13	14	0952-22	11	1001-31	13	1010-40	10	1019-49	11	1027-57	14	1032-02	9
0958-28	3	1013-43	8	1022-52	11	1031-01	10	1040-10	11	1049-19	11	1057-27	10	1102-32	9
1028-58	8	1043-13	12	1052-22	12	1101-31	15	1110-40	10	1119-49	11	1127-57	12	1132-02	6

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 30 March 1968

G-26 35 SBE GMQ 185/5.0		G-6 85 SBE EMR 193/6.1		G-25 85 SBE BOQ 187/7.5		G-1 50 SBE CMQ 190/8.8		G-16 10 SBE COQ 192/9.7		G-8 -10 SBE DMQ 185/9.8		G-36 30 SBE COQ 175/8.1		G-27 80 SBE AMQ 161/8.8	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0846-16	0	0857-27	3	0905-35	5	0919-49	8	0928-58	9	0938-08	19	0949-19	6	1000-30	14
0916-46	3	0927-57	4	0935-05	11	0949-19	14	0958-28	11	1008-38	22	1019-49	9	1030-00	10
0946-16	5	0957-27	5	1005-35	7	1019-49	13	1028-58	9	1038-08	12	1049-19	4	1100-30	7
1016-46	4	1027-57	3	1035-05	5	1049-19	10	1058-28	9	1108-38	20	1119-49	4	1130-00	7
1046-16	8	1057-27	4	1105-35	7	1119-49	7	1128-58	16	1138-08	8	1149-19	4	1200-30	7

Keystone Plume 1 April 1968

G-25 85 SBE FMQ 142/5.8		G-26 60 SBE FMQ 135/7.3		G-6 105 SBE CMQ 138/8.7		G-1 120 SBE CMQ 141/9.6		G-27 130 SBE EMQ 131/9.7		G-36 120 SBE AMQ 125/10.4		G-16 100 SBE AMQ 120/9.6		G-8 35 SBE DMQ 116/9.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0827-57	1	0835-05	3	0845-15	0	0852-22	3	0901-31	7	0907-37	6	0915-45	1	0920-50	0
0857-27	1	0905-35	0	0915-45	0	0922-52	3	0931-01	9	0937-07	6	0945-15	1	0950-20	2
0927-57	0	0935-05	0	0945-15	2	0952-22	5	1001-31	5	1007-37	8	1015-45	2	1020-50	2
0957-27	0	1005-35	2	1015-45	2	1022-52	5	1031-01	10	1037-07	8	1045-15	0	1050-20	2
1027-57	0	1035-05	2	1045-15	3	1052-22	3	1101-31	9	1107-37	6	1115-45	0	1120-50	0
1057-27	0	1105-35	2	1115-45	3	1122-52	3	1131-01	12	1137-07	3	1145-15	3	1150-20	3

Keystone Plume 2 April 1968

G-36 50 SBE GMQ 112/9.2		G-16 30 SBE FMQ 104/6.5		G-1 25 SBE BMQ 096/5.7		G-6 25 SBE DMQ 078/6.0		G-26 25 SBE CMQ 070/7.0		G-8 70 SBE DOQ 063/7.6		G-25 90 SBE AMQ 055/8.3		G-27 50 SBE BMQ 046/8.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0825-55	1	0837-07	4	0845-15	4	0853-23	3	0858-28	4	0908-38	7	0918-48	10	0923-53	9
0855-25	4	0907-37	4	0915-45	3	0923-53	4	0928-58	9	0938-08	5	0948-18	9	0953-23	9
0925-55	3	0937-07	3	0945-15	3	0953-23	7	0958-28	6	1008-38	12	1018-48	11	1023-53	11
0955-25	4	1007-37	2	1015-45	3	1023-53	7	1028-58	8	1038-08	10	1048-18	11	1053-23	11
1025-55	5	1037-07	4	1045-15	3	1053-23	4	1058-28	9	1108-38	9	1118-48	11	1123-53	11
1055-25	4	1107-37	3	1115-45	0	1123-53	7	1128-58	9	1138-08	10	1148-18	4	1153-23	7

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 3 April 1968

G-27 5 SBE HMQ 015/5.0		G-26 10 SBE CMQ 014/6.2		G-1 -5 SBE GMQ 023/7.4		G-25 10 SBE BOQ 024/8.0		G-8 5 SBE BMQ 029/8.5		G-36 15 SBE BMQ 034/9.2		G-6 30 SBE BMQ 037/10.0		G-16 10 SBE BMQ 042/10.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0845-15	0	0852-22	0	0901-31	0	0907-37	3	0911-41	2	0916-46	3	0920-50	4	0926-56	4
0915-45	0	0922-52	0	0931-01	0	0937-07	4	0941-11	4	0946-16	3	0950-20	3	0956-26	6
0945-15	0	0952-22	0	1001-31	4	1007-37	3	1011-41	4	1016-46	3	1020-50	3	1026-56	4
1015-45	0	1022-52	0	1031-01	0	1037-07	3	1041-11	0	1046-16	3	1050-20	4	1056-26	3
1045-15	0	1052-22	0	1101-31	0			1111-41	0	1116-46	3	1120-50	4	1126-56	3

Keystone Plume 6 May 1968

G-1 35 SBE CMQ 178/6.5		G-26 80 SBE CNQ 188/7.4		G-27 15 SBE CMQ 181/8.1		G-25 65 SBE BMQ 169/8.3		G-8 85 SBE BMQ 158/8.7		G-16 100 SBE EMQ 148/8.9		G-6 120 SBE CMQ 140/9.5		G-36 125 SBE DMQ 136/9.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0737-07	0	0747-17	0	0755-25	0	0805-35	2	0818-48	7	0825-55	4	0833-03	0	0841-11	2
0807-37	3	0817-47	0	0825-55	0	0835-05	0	0848-18	5	0855-25	5	0903-33	3	0911-41	2
0837-07	2	0847-17	0	0855-25	1	0905-35	0	0918-48	0	0925-55	3	0933-03	0	0941-11	2
0907-37	3	0917-47	0	0925-55	1	0935-05	2	0948-18	0	0955-25	3	1003-33	0	1011-41	1
0937-07	1	0947-17	0	0955-25	0	1005-35	0	1018-48	4	1025-55	4	1033-03	2	1041-11	2

Keystone Plume 7 May 1968

G-25 10 SBE BNQ 221/5.7		G-26 70 SBE AMQ 218/7.4		G-8 70 SBE AMQ 219/7.8		G-6 125 SBE BMQ 233/8.8		G-36 110 SBE FMQ 238/10.2		G-1 115 SBE BOQ 234/11.0		G-27 145 SBE BMQ 232/11.9		G-16 125 SBE BNQ 232/12.8	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0751-21	0	0758-28	3	0806-36	0	0813-43	1	0820-50	1	0829-59	3	0837-07	2	0845-15	1
0821-51	0	0828-58	3	0836-06	0	0843-13	1	0850-20	1	0859-29	4	0907-37	2	0915-45	3
0851-21	0	0858-28	2	0906-36	0	0913-43	1	0920-50	3	0929-59	3	0937-07	2	0945-15	1
0921-51	0	0928-58	2	0936-06	0	0943-13	0	0950-20	1	0959-29	2	1007-37	1	1015-45	2
0951-21	0	0958-28	0	1006-36	0	1013-43	0	1020-50	3	1029-59	5	1037-07	0	1045-15	0

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 8 May 1968

G-1 10 SBE BMQ 015/6.1		G-25 15 SBE CMQ 013/7.0		G-36 25 SBE CNQ 006/7.0		G-26 50 SBE BMQ 002/8.0		G-8 85 SBE AMQ 002/9.8		G-27 90 SBE BMQ 355/9.0		G-6 100 SBE EMQ 354/8.3		G-16 ~5 SBE GMQ 023/7.3	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0751-21	0	0757-27	-	0802-32	0	0809-39	0	0817-47	0	0825-55	0	0831-01	0	0845-15	-
0821-51	0	0827-57	0	0832-02	0	0839-09	0	0847-17	0	0855-25	0	0901-31	0	0915-45	0
0851-21	0	0857-27	0	0902-32	1	0909-39	0	0917-47	2	0925-55	0	0931-01	0	0945-15	0
0921-51	0	0927-57	0	0932-02	3	0939-09	0	0947-17	2	0955-25	0	1001-31	0	1015-45	0
0951-21	0	0957-27	1	1002-32	7	1009-39	0	1017-47	2	1025-55	0	1031-01	0	1045-15	0
1021-51	0	1027-57	1	1032-02	6	1039-09	0	1047-17	0	1055-25	0	1101-31	0	1115-45	0

Keystone Plume 10 May 1968

G-26 40 SBE GNQ 110/8.8		G-25 40 SBE FMQ 103/9.6		G-16 55 SBE FNQ 098/9.8		G-27 55 SBE GMQ 094/10.4		G-6 75 SBE BMQ 090/9.4		G-8 20 SBE GNQ 085/8.6		G-1 35 SBE EMQ 094/7.9		G-36 35 SBE FMS 096/6.2	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0740-10	0	0747-17	0	0754-24	0	0801-31	1	0811-41	0	0820-50	4	0837-07	0	0843-13	2
0810-40	0	0817-47	0	0824-54	0	0831-01	0	0841-11	0	0850-20	2	0907-37	4	0913-43	1
0840-10	0	0847-17	0	0854-24	0	0901-31	0	0911-41	1	0920-50	2	0937-07	4	0943-13	1
0910-40	0	0917-47	0	0924-54	0	0931-01	0	0941-11	3	0950-20	2	1007-37	1	1013-43	3
0940-10	0	0947-17	0	0954-24	0	1001-31	0	1011-41	1	1020-50	4	1037-07	1	1043-13	2
1010-40	0	1017-47	0	1024-54	3	1031-01	0	1041-11	3	1050-20	3	1107-37	4	1113-43	3

Keystone Plume 27 May 1968

G-36 90 SBE BMQ 322/6.7		G-6 60 SBE CMQ 328/10.1		G-25 25 SBE DMP 329/4.5		G-8 30 SBE GMQ 331/6.8		G-26 40 SBE GMQ 313/8.8		G-1 25 SBE BMQ 305/8.4		G-16 35 SBE BNQ 317/9.3		G-27 50 SBE BMQ 321/9.5	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0750-20	0	0800-30	0	0824-54	0	0830-00	2	0840-10	6	0850-20	0	0905-35	3	0911-41	1
0820-50	0	0830-00	0	0854-24	1	0900-30	1	0910-40	2	0920-50	0	0935-05	3	0941-11	3
0850-20	0	0900-30	0	0924-54	1	0930-00	2	0940-10	2	0950-20	0	1005-35	4	1011-41	1
0920-50	0	0930-00	0	0954-24	0	1000-30	1	1010-40	2	1020-50	0	1035-05	3	1041-11	2
0950-20	0	1000-30	0	1024-54	0	1030-00	4	1040-10	2	1050-20	1	1105-35	4	1111-41	2
1020-50	0	1030-00	0												

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 29 June 1968

G-36 25 SBE FMQ 030/4.0		G-6 30 SBE FMQ 039/5.7		G-25 55 SBE BMQ 037/7.1		G-8 -5 SBE GMQ 023/7.4		G-1 5 SBE GMQ 026/8.3		G-27 15 SBE DMQ 033/9.1		G-26 30 SBE BMQ 037/9.8		G-16 10 SBE BMQ 040/10.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0821-51	0	0828-58	3	0837-07	1	0847-17	1	0855-25	1	0903-33	6	0909-39	0	0915-45	1
0851-21	0	0858-28	3	0907-37	1	0917-47	1	0925-55	2	0933-03	6	0939-09	0	0945-15	1
0921-51	0	0928-58	2	0937-07	0	0947-17	2	0955-25	2	1003-33	11	1009-39	0	1015-45	1
0951-21	4	0958-28	2	1007-37	0	1017-47	1	1025-55	3	1033-03	8	1039-09	2	1045-15	1
1021-51	3	1028-58	1	1037-07	-	1047-17	0	1055-25	2	1103-33	1	1109-39	-	1115-45	5

Keystone Plume 30 June 1968

G-8 5 SBE DMQ 086/6.0		G-25 65 SBE CMQ 078/7.2		G-6 40 SBE FMQ 073/8.8		G-36 60 SBE FMQ 072/10.2		G-27 60 SBE BMQ 061/10.1		G-1 65 SBE CNQ 065/10.6		G-16 75 SBE BMQ 072/10.1		G-26 30 SBE BNQ 077/10.5	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0737-07	0	0745-15	3	0756-26	0	0805-35	0	0813-43	4	0820-50	1	0828-58	3	0836-06	0
0807-37	0	0815-45	2	0826-56	0	0835-05	0	0843-13	3	0850-20	0	0858-28	3	0906-36	5
0837-07	0	0845-15	0	0856-26	0	0905-35	1	0913-43	3	0920-50	0	0928-58	4	0936-06	5
0907-37	0	0915-45	0	0926-56	0	0935-05	1	0943-13	2	0950-20	0	0958-28	0	1006-36	0
0937-07	0	0945-15	0	0956-26	0	1005-35	0	1013-43	1	1020-50	0	1028-58	0	1036-06	0
1007-37	0	1015-45	0	1026-56	4	1035-05	0	1043-13	1	1050-20	0	1058-28	0	1106-36	0

Keystone Plume 1 July 1968

G-36 65 SBE BNQ 074/4.6		G-6 30 SBE CMQ 073/6.5		G-25 45 SBE BMQ 076/7.9		G-8 25 SBE GNQ 073/9.6		G-26 40 SBE CMQ 066/10.6		G-16 65 SBE BMQ 064/11.5		G-27 40 SBE BNQ 071/12.9		G-1 10 SBE GMQ 083/11.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0745-15	0	0800-30	0	0812-42	0	0820-50	0	0830-00	7	0837-07	7	0854-24	3	0903-33	2
0815-45	0	0830-00	0	0842-12	0	0850-20	0	0900-30	7	0907-37	10	0924-54	7	0933-03	8
0845-15	0	0900-30	0	0912-42	0	0920-50	0	0930-00	16	0937-07	14	0954-24	3	1003-33	5
0915-45	0	0930-00	0	0942-12	0	0950-20	0	1000-30	7	1007-37	5	1024-54	3	1033-03	6
0945-15	0	1000-30	0	1012-42	0	1020-50	0	1030-00	7	1037-07	8	1054-24	4	1103-33	6
1015-45	0	1030-00	0	1042-12	0	1050-20	0	1100-30	7	1107-37	7	1124-54	7	1133-03	8

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 3 July 1968

G-16 70 SBE CMQ 123/3.9		G-27 75 SBE EMQ 121/5.3		G-1 40 SBE BMQ 121/6.7		G-8 75 SBE BMQ 134/7.3		G-6 125 SBE EMQ 137/9.0		G-26 145 SBE BMQ 139/10.5		G-25 105 SBE EMQ 133/11.5		G-36 120 SBE CMQ 123/11.6	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0742-12	1	0754-24	3	0803-33	2	0815-45	0	0823-53	0	0830-00	0	0838-08	0	0846-16	0
0812-42	3	0824-54	4	0833-03	2	0845-15	0	0853-23	0	0900-30	0	0908-38	0	0916-46	0
0842-12	4	0854-24	3	0903-33	4	0915-45	0	0923-53	0	0930-00	0	0938-08	0	0946-16	6
0912-42	3	0924-54	6	0933-03	4	0945-15	0	0953-23	0	1000-30	0	1008-38	0	1016-46	1
0942-12	3	0954-24	3	1003-33	4	1015-45	0	1023-53	0	1030-00	0	1038-08	0	1046-16	4

Keystone Plume 5 July 1968

G-27 35 SBE BMQ 071/4.5		G-6 135 SBE ANQ 058/5.9		G-8 30 SBE GMQ 069/7.0		G-1 75 SBE AMQ 053/8.4		G-16 60 SBE CMQ 053/10.7		G-26 55 SBE FMQ 058/11.0		G-25 60 SBE BMQ 051/8.8		G-36 40 SBE BMQ 044/8.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0737-07	0	0750-20	0	0800-30	7	0812-42	3	0827-57	0	0837-07	2	0844-14	-	0918-48	0
0807-37	0	0820-50	0	0830-00	4	0842-12	2	0857-27	0	0907-37	2	0914-44	1	0948-18	3
0837-07	0	0850-20	0	0900-30	5	0912-42	2	0927-57	0	0937-07	2	0944-14	3	1018-48	2
0907-37	0	0920-50	0	0930-00	2	0942-12	3	0957-27	0	1007-37	0	1014-44	0	1048-18	3
0937-07	0	0950-20	4	1000-30	2	1012-42	0	1027-57	4	1037-07	0	1044-14	6	1118-48	6
1007-37	0	1020-50	4	1030-00	1	1042-12	0	1057-27	5	1107-37	0	1114-44	-	1148-18	-

Keystone Plume 9 July 1968

G-6 50 SBE BMQ 058/3.8		G-36 75 SBE BMQ 057/4.8		G-8 95 SBE CNQ 056/6.3		G-25 50 SBE BMQ 051/7.2		G-16 80 SBE CMQ 056/8.1		G-26 75 SBE CMQ 054/9.7		G-27 25 SBE EMQ 055/11.3		G-1 15 SBE GMQ 054/13.2	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0743-13	0	0754-24	3	0803-33	2	0811-41	2	0820-50	0	0830-00	0	0839-09	0	0848-18	0
0813-43	0	0824-54	0	0833-03	0	0841-11	2	0850-20	0	0900-30	5	0909-39	1	0918-48	0
0843-13	0	0854-24	0	0903-33	2	0911-41	2	0920-50	0	0930-00	0	0939-09	1	0948-18	0
0913-43	0	0924-54	0	0933-03	0	0941-11	2	0950-20	0	1000-30	0	1009-39	1	1018-48	0
0943-13	0	0954-24	0	1003-33	3	1011-41	2	1020-50	0	1030-00	0	1039-09	3	1048-18	0

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 21 July 1968

G-25 90 SBE CMQ 312/4.4		G-6 45 SBE CMQ 330/4.3		G-36 80 SBE BMQ 352/6.4		G-26 25 SBE CNQ 050/7.0		G-1 10 SBE GMQ 013/7.0		G-16 10 SBE GMQ 023/6.5		G-27 10 SBE BMQ 026/8.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0757-27	0	0805-35	2	0825-55	0	0840-10	2	0847-17	5	0855-25	1	0900-30	1
0827-57	2	0835-05	0	0855-25	0	0910-40	2	0917-47	4	0925-55	0	0930-00	0
0857-27	9	0905-35	0	0925-55	0	0940-10	2	0947-17	3	0955-25	1	1000-30	1
0927-57	2	0935-05	0	0955-25	0	1010-40	0	1017-47	0	1025-55	0	1030-00	1
0957-27	0	1005-35	0	1025-55	0	1040-10	0	1047-17	0	1055-25	0	1100-30	1

Keystone Plume 17 October 1968

G-8 65 SBE AMQ 350/3.8		G-25 80 SBE BMQ 351/6.3		G-36 40 SBE BMQ 352/7.0		G-6 100 SBE AMQ 353/8.3		G-27 75 SBE CNQ 347/8.5		G-1 35 SBE DMQ 341/8.5	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0854-24	0	0904-34	0	0922-52	0	0928-58	0	0936-06	0	0944-14	0
0924-54	0	0934-04	0	0952-22	0	0958-28	0	1006-36	0	1014-44	1
0954-24	0	1004-34	0	1022-52	0	1028-58	0	1036-06	0	1044-14	0
1024-54	0	1034-04	0	1052-22	0	1058-28	0	1106-36	0	1114-44	0
1054-24	0	1104-34	0	1122-52	0	1128-58	0	1136-06	1	1144-14	1
1124-54	0	1134-04	0	1152-22	0	1158-28	0	1206-36	0	1214-44	2

Keystone Plume 20 October 1968

G-25 30 SBE GMQ 096/6.5		G-6 50 SBE EMQ 103/5.5		G-8 20 SBE DMQ 121/6.7		G-16 125 SBE CMQ 127/9.8		G-1 35 SBE DMQ 115/9.5		G-27 120 SBE FMQ 104/9.6	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0937-07	2	0951-21	1	1001-31	2	1035-05	4	1045-15	5	1055-25	4
1007-37	0	1021-51	1	1031-01	3	1105-35	3	1115-45	5	1125-55	4
1037-07	1	1051-21	1	1101-31	4	1135-05	3	1145-15	4	1155-25	4
1107-37	3	1121-51	1	1131-01	2	1205-35	1	1215-45	6	1225-55	5

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 21 October 1968

G-8 60 SBE FMQ 133/6.8		G-6 85 SBE FMQ 141/5.8		G-36 75 SBE AMQ 148/5.3		G-25 65 SBE CMQ 146/7.4		G-26 130 SBE BMQ 138/8.0		G-1 120 SBE BMQ 130/9.7		G-27 90 SBE BMQ 139/9.5		G-16 140 SBE AMQ 145/11.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0912-42	0	0918-48	0	0928-58	0	0941-11	0	0948-18	3	0955-25	4	1002-32	2	1022-52	3
0942-12	0	0948-18	2	0958-28	0	1011-41	0	1018-48	4	1025-55	2	1032-02	3	1052-22	4
1012-42	3	1018-48	1	1028-58	2	1041-11	3	1048-18	1	1055-25	0	1102-32	4	1122-52	0
1042-12	0	1048-18	2	1058-28	-	1111-41	2	1118-48	2	1125-55	4	1132-02	4	1152-22	5
1112-42	2	1118-48	1	1128-58	2	1141-11	2	1148-18	1	1155-25	4	1202-32	2	1222-52	3
1142-12	2	1148-18	1	1158-28	2	1211-41	2	1218-48	3	1225-55	3	1232-02	4	1252-22	3

Keystone Plume 22 October 1968

G-8 35 SBE FMQ 014/8.6		G-6 20 SBE CMQ 013/6.9		G-25 10 SBE FMQ 023/6.8		G-36 10 SBE GMQ 019/7.8		G-16 20 SBE CMQ 029/7.5		G-1 20 SBE GMQ 028/8.4		G-27 15 SBE DMQ 032/8.8		G-26 40 SBE DMQ 023/9.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0923-53	0	0932-02	0	0939-09	2	0945-15	1	0952-22	1	0958-28	2	1004-34	0	1008-38	-
0953-23	0	1002-32	3	1009-39	2	1015-45	1	1022-52	2	1028-58	3	1034-04	4	1038-08	4
1023-53	0	1032-02	1	1039-09	3	1045-15	1	1052-22	3	1058-28	3	1104-34	4	1108-38	1
1053-23	1	1102-32	1	1109-39	0	1115-45	3	1122-52	3	1128-58	2	1134-04	1	1138-08	4
1123-53	-	1132-02	1	1139-09	4	1145-15	1	1152-22	1	1158-28	4	1204-34	1	1208-38	4
1153-23	3	1202-32	3	1209-39	3	1215-45	2	1222-52	4	1228-58	5	1234-04	4	1238-08	4

Keystone Plume 23 October 1968

G-25 5 SBE GMQ 089/5.9		G-6 35 SBE CMQ 082/5.9		G-8 40 SBE CMQ 072/6.6		G-36 95 SBE FMQ 066/8.4		G-16 40 SBE CMQ 080/8.5		G-27 15 SBE GMQ 085/10.8		G-1 20 SBE BMQ 079/10.8		G-26 55 SBE BNQ 073/11.4	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0907-37	0	0911-41	0	0916-46	0	0925-55	3	0938-08	1	0947-17	3	0955-25	5	1001-31	4
0937-07	0	0941-11	0	0946-16	1	0955-25	3	1008-38	1	1017-47	3	1025-55	4	1031-01	4
1007-37	0	1011-41	0	1016-46	4	1025-55	3	1038-08	1	1047-17	3	1055-25	3	1101-31	5
1037-07	0	1041-11	2	1046-16	3	1055-25	3	1108-38	2	1117-47	3	1125-55	3	1131-01	1
1107-37	0	1111-41	3	1116-46	4	1125-55	3	1138-08	3	1147-17	3	1155-25	3	1201-31	1

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 26 October 1968

G-6 115 SBE AMQ 105/12.2		G-8 120 SBE BMQ 100/11.7		G-25 75 SBE GMQ 099/9.6		G-36 50 SBE FMQ 103/8.3		G-26 45 SBE BMQ 112/9.2		G-16 120 SBE FMQ 104/9.6		G-27 25 SBE DMQ 115/9.4		G-1 160 SBE CNQ 109/11.1	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
0910-40	3	0917-47	4	0925-55	0	0937-07	2	0945-15	2	0952-22	2	1002-32	2	1011-41	3
0940-10	3	0947-17	3	0955-25	2	1007-37	2	1015-45	2	1022-52	2	1032-02	2	1041-11	4
1010-40	2	1017-47	4	1025-55	2	1037-07	2	1045-15	2	1052-22	2	1102-32	3	1111-41	3

Keystone Plume 29 October 1968

G-8 115 SBE BMQ 109/12.2		G-36 120 SBE BMQ 104/11.6		G-25 75 SBE CMQ 104/9.6		G-6 45 SBE FMQ 107/8.3		G-27 25 SBE FMQ 115/8.7		G-1 120 SBE BMQ 108/9.7		G-16 25 SBE DMQ 120/9.5		G-26 160 SBE CNQ 113/11.0	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
1147-17	1	1151-21	1	1158-28	1	1205-35	1	1211-41	1	1219-49	1	1228-58	1	1238-08	2
1217-47	1	1221-51	1	1228-58	1	1235-05	1	1241-11	1	1249-19	1	1258-28	2	1308-38	2
1247-17	1	1251-21	1	1258-28	1	1305-35	1	1311-41	1	1319-49	1	1328-58	3	1338-08	3
1317-47	1	1321-51	1	1328-58	0	1335-05	0	1341-11	2	1349-19	1	1358-28	3	1408-38	3

Keystone Plume 31 October 1968

G-25 20 SBE BMQ 050/10.8		G-36 60 SBE BMQ 045/10.3		G-6 30 SBE BMQ 038/10.0		G-8 15 SBE DMQ 034/9.3		G-27 20 SBE DMQ 030/8.7		G-16 65 SBE FMQ 037/7.3		G-26 30 SBE DMQ 044/7.6		G-1 50 SBE BMQ 052/8.6	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
1215-45	-	1218-48	4	1223-53	0	1233-03	0	1236-06	0	1245-15	5	1252-22	3	1258-28	7
1245-15	0	1248-18	1	1253-23	1	1303-33	0	1306-36	3	1315-45	4	1322-52	4	1328-58	3
1315-45	1	1318-48	0	1323-53	1	1333-03	1	1336-06	1	1345-15	3	1352-22	3	1358-28	4
1345-15	0	1348-18	0	1353-23	0	1403-33	0	1406-36	1	1415-45	3	1422-52	4	1428-58	5

Table 7 (continued). AVERAGE GROUND-LEVEL SO_2 CONCENTRATIONS - BUBBLERS

Keystone Plume 1 November 1968

G-36 35 SBE BMQ 069/4.7		G-6 50 SBE BMQ 063/6.7		G-25 65 SBE EMQ 071/7.1		G-8 60 SBE BMQ 061/9.9		G-16 115 SBE CMQ 057/9.3		G-1 45 SBE BMQ 052/8.6		G-27 10 SBE BMQ 045/8.0		G-2[illegible] 35 SBE FM[illegible] 039/7.1	
EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm	EST	pphm
1050-20	2	1104-34	0	1111-41	5	1126-56	9	1131-01	7	1136-06	8	1143-13	1	1148-18	4
1120-50	3	1134-04	2	1141-11	9	1156-26	12	1201-31	6	1206-36	10	1213-43	4	1218-48	6
1150-20	4	1204-34	4	1211-41	13	1226-56	13	1231-01	5	1236-06	15	1243-13	6	1248-18	4
1220-50	2	1234-04	4	1241-11	5	1256-26	17	1301-31	7	1306-36	7	1313-43	3	1318-48	4
1250-20	4	1304-34	4	1311-41	14	1326-56	12	1331-01	5	1336-06	8	1343-13	4	1348-18	8
1320-50	2	1334-04	5	1341-11	13	1356-26	21	1401-31	5	1406-36	9	1413-43	7	1418-48	5

HELICOPTER TEMPERATURE PROFILES

Table 8 lists the helicopter profiles obtained during spiral ascents just upwind of the Keystone Station. Drybulb and wetbulb temperatures are listed for 50-meter intervals above stack base plus additional levels such as bases and tops of inversions. Wetbulb values are occasionally missing due to freezing of the sensor.

On most profiles surface drybulb and wetbulb values are included. These temperatures were measured within 1 meter of the surface during 30-mph or greater forward speeds so that no downwash interfered with the readings. To allow for changing pressure patterns during an experiment, the helicopter landed before each profile so the indicated surface height from the pressure transducer could be recorded. Approximately 5 minutes of flight time was required to complete a 1000-meter profile.

During a plant outage on April 10, 11, and 12, vertical flights were performed nearly every 15 minutes to document the inversion breakup mechanism in the valley surrounding Keystone. These profiles are also contained in Table 8.

Table 8. HELICOPTER TEMPERATURE PROFILES

Symbols

Ascn #	:	Individual ascension or profile designation.
EST	:	Beginning time of profile.
Z (m)	:	Height above stack base elevation in whole meters.
WB (°C)	:	Wet bulb temperature to nearest tenth degree Centigrade.
T (°C)	:	Dry bulb temperature to nearest tenth degree Centigrade.
Sfc	:	Temperatures measured within one meter of stack base elevation.
---	:	Missing data.

Table 8. HELICOPTER TEMPERATURE PROFILES

Ascn #44 14 March 1968 0652 EST Keystone			Ascn #45 14 March 1968 0757 EST Keystone			Ascn #46 14 March 1968 0919 EST Keystone			Ascn #47 14 March 1968 1048 EST Keystone			Ascn #48 15 March 1968 0654 EST Keystone			Ascn #49 15 March 1968 0941 EST Keystone			Ascn #50 15 March 1968 1051 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	- 9.6	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	0.8	1.0	Sfc	2.8	7.8	Sfc	---	---
10	---	- 9.3	10	---	- 8.9	20	---	- 6.1	15	---	- 3.8	20	---	0.4	50	2.8	7.8	20	3.8	9.9
25	---	-10.4	50	---	- 9.0	50	---	- 6.3	40	---	- 3.2	25	---	- 1.0	100	2.3	7.3	50	4.1	9.9
50	---	- 9.8	100	---	- 9.2	100	---	- 6.5	50	---	- 3.8	50	---	- 1.6	150	1.8	6.8	100	3.7	9.4
65	---	- 9.8	150	---	- 9.2	150	---	- 6.7	100	---	- 4.2	100	-1.1	1.4	200	1.6	6.3	150	3.4	9.0
75	---	- 9.2	200	---	- 9.5	200	---	- 7.3	150	---	- 4.3	150	-0.3	2.6	250	1.5	6.2	200	3.3	8.8
100	---	- 8.9	235	---	-10.9	250	---	- 7.8	200	---	- 5.0	200	0.4	3.4	300	1.0	5.6	250	2.9	8.3
150	---	- 8.8	250	---	- 9.9	300	---	- 8.3	250	---	- 5.3	250	1.3	4.5	350	0.9	5.5	300	2.4	7.6
200	---	- 8.9	300	---	- 9.8	350	---	- 8.8	300	---	- 5.8	300	1.5	4.9	400	0.7	5.4	350	2.0	7.0
250	---	- 9.0	350	---	-10.4	400	---	- 9.2	350	---	- 6.2	350	2.5	5.4	415	0.9	5.7	400	1.7	6.6
300	---	- 9.2	365	---	-10.8	450	---	- 9.7	400	---	- 6.6	360	2.8	5.5	450	0.5	5.3	450	1.5	6.2
350	---	- 9.2	385	---	-10.1	500	---	-10.0	450	---	- 7.2	400	2.8	5.4	500	0.4	5.2	500	1.3	5.9
400	---	- 9.0	400	---	-10.5	550	---	-10.3	500	---	- 7.6	450	2.4	5.0	550	0.3	5.0	550	0.8	5.3
450	---	- 8.2	415	---	-10.0	600	---	-10.0	550	---	- 7.9	500	2.9	5.0	600	0.0	4.6	600	0.3	4.7
500	---	- 8.3	450	---	- 9.5	650	---	-10.2	600	---	- 8.4	550	3.5	4.7	650	0.2	4.8	650	0.1	4.3
550	---	- 8.7	500	---	- 9.6	700	---	-10.5	650	---	- 9.0	600	3.1	4.2	700	-0.2	4.4	700	-0.2	3.8
600	---	- 9.0	550	---	- 9.9	750	---	-10.7	700	---	- 9.4	630	3.1	4.0	750	-0.6	3.8	730	-0.4	3.6
650	---	- 9.3	600	---	-10.0	775	---	-10.9	750	---	- 9.9	650	3.8	4.4	800	-1.0	3.2			
700	---	- 9.7	650	---	-10.4				800	---	-10.4	700	3.8	4.2	850	-1.0	3.2			
750	---	- 9.9	700	---	-10.6				850	---	-10.9	750	4.1	4.4	900	-1.4	2.6			
800	---	-10.2							900	---	-11.4	800	4.0	4.2						
850	---	-10.4							950	---	-11.8	850	3.7	3.8						
900	---	-10.7							1000	---	-12.2	900	3.4	3.4						
950	---	-11.0							1050	---	-12.6	950	3.0	3.0						
1000	---	-11.4							1080	---	-12.8	1000	2.5	2.5						
1015	---	-11.6										1040	1.9	1.9						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #51 16 March 1968 0652 EST Keystone			Ascn #52 16 March 1968 0824 EST Keystone			Ascn #53 18 March 1968 0655 EST Keystone			Ascn #54 18 March 1968 0819 EST Keystone			Ascn #55 18 March 1968 0922 EST Keystone			Ascn #56 18 March 1968 1050 EST Keystone			Ascn #57 19 March 1968 0700 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	6.3	7.4	Sfc	---	---	Sfc	---	2.0	Sfc	1.5	4.2	Sfc	---	---	Sfc	---	---
10	4.8	5.8	50	6.3	7.4	10	---	- 0.8	50	---	1.8	50	1.4	4.0	10	3.5	7.7	10	0.9	1.2
40	3.5	4.9	100	6.4	7.4	20	---	- 1.6	100	---	1.5	100	1.4	3.8	50	3.6	7.6	50	---	- 0.2
50	4.7	7.0	150	6.4	7.4	50	---	- 0.6	150	---	1.1	150	0.9	3.2	100	3.1	7.1	100	0.4	0.8
100	5.2	7.4	200	6.1	7.0	70	---	0.3	200	---	0.8	200	0.6	2.8	150	3.1	6.9	150	1.2	2.0
150	5.6	7.8	250	6.2	7.1	100	---	0.6	250	---	0.4	250	0.4	2.4	200	2.8	6.5	200	2.4	4.2
200	5.7	7.8	300	6.1	7.0	120	---	0.9	300	---	0.2	300	0.2	2.0	250	2.4	5.9	250	3.0	6.5
250	5.9	7.5	350	6.0	6.8	150	---	0.8	350	---	0.0	350	-0.1	1.9	300	2.2	5.6	300	2.6	8.0
300	5.8	7.4	400	5.9	6.7	200	---	0.6	400	---	- 0.3	400	0.0	1.6	350	1.8	5.1	350	3.1	8.9
350	6.2	7.3	410	6.1	6.9	250	---	0.3	450	---	0.0	420	0.3	2.3	400	1.5	4.8	400	3.6	8.9
400	6.0	7.0	450	6.0	6.8	300	---	0.1	500	2.3	3.5	450	0.0	2.2	450	1.1	4.6	450	3.4	9.0
450	5.9	6.7	470	6.1	6.9	350	---	0.0	520	4.1	5.6	470	0.1	1.3	500	1.3	4.4	500	2.9	8.9
500	6.0	6.9	500	5.9	6.6	400	---	- 0.1	550	5.2	6.2	500	0.0	1.6	550	0.6	4.0	550	3.2	8.8
550	6.1	6.9	550	5.6	6.2	450	---	0.2	600	5.8	6.3	550	-0.1	4.1	600	0.1	3.3	600	3.8	8.6
600	5.9	6.6	600	5.5	6.1	465	---	0.2	650	6.3	6.4	600	0.6	5.4	650	-0.4	2.8	630	3.1	8.9
650	5.9	6.6	650	5.0	5.4	500	0.9	1.5	700	6.2	6.3	630	0.8	6.4	700	-0.4	3.0	650	4.5	8.8
700	5.8	6.5	700	5.1	5.5	550	2.5	4.0	750	6.1	6.3	650	0.8	5.9	750	-0.7	2.8	700	5.3	8.6
750	5.8	6.5	750	5.1	5.7	600	3.6	5.2	800	6.0	6.1	700	1.4	6.6	800	-1.0	2.4	750	5.5	8.5
800	5.6	6.3	800	5.0	5.6	650	4.2	5.6	850	6.2	6.2	750	2.8	6.5	850	-0.7	2.9	800	5.6	8.5
850	5.4	6.0	850	4.8	5.4	700	5.5	6.6	900	5.9	5.9	800	3.5	6.2	870	-1.3	2.1	850	5.6	8.2
900	5.0	5.5	900	4.4	5.0	750	5.6	6.6	950	5.5	5.5	850	4.5	6.1	900	-1.2	3.5	900	5.5	8.0
950	4.6	5.2	950	4.1	4.6	800	5.8	6.7	1000	5.4	5.4	900	4.6	5.8	920	-1.3	3.5	950	5.3	7.8
1000	4.2	4.8	1000	3.8	4.2	850	5.8	6.6	1050	5.2	5.2	950	4.7	5.6	950	-1.1	4.3	1000	5.3	7.6
1050	3.9	4.5	1020	3.6	4.0	900	5.8	6.4				1000	4.6	5.3	1000	-1.0	5.2	1050	5.2	7.3
						950	5.8	6.4				1050	4.6	5.2	1050	-0.8	5.0			
						1000	5.5	6.2							1100	-1.1	5.1			
						1030	5.4	6.1												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #58 19 March 968 0757 EST Keystone			Ascn #59 19 March 1968 0916 EST Keystone			Ascn #60 19 March 1968 1133 EST Keystone			Ascn #61 20 March 1968 0654 EST Keystone			Ascn #62 20 March 1968 0810 EST Keystone			Ascn #63 25 March 1968 0700 EST Keystone			Ascn #64 25 March 1968 0848 EST Keystone		
Z(m)	WB(°C)	T (°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	0.7	1.4	Sfc	2.7	3.8	Sfc	---	---	Sfc	---	7.6	Sfc	---	7.0	Sfc	---	---	Sfc	---	---
50	0.2	0.6	50	2.4	3.5	10	7.4	11.6	50	---	6.1	50	---	6.0	10	---	- 2.6	20	---	2.2
70	0.1	0.6	100	2.5	3.9	50	7.6	11.6	60	---	6.4	100	---	7.5	20	---	- 4.0	30	---	2.2
100	0.6	1.2	150	2.8	4.4	100	6.9	11.1	100	---	9.3	150	---	10.2	50	---	- 4.0	50	---	1.8
150	1.7	3.2	200	3.0	4.8	150	6.6	10.6	150	---	11.1	200	---	10.4	100	---	- 1.8	100	---	1.4
200	2.2	4.6	250	3.2	6.5	200	6.5	10.0	170	---	12.5	250	---	10.5	150	---	- 1.1	150	---	0.9
250	2.4	6.6	300	2.7	7.5	250	6.3	9.7	200	---	13.0	270	---	10.7	200	---	- 0.6	200	---	0.7
300	3.0	8.0	315	2.5	8.4	300	5.8	9.4	250	---	13.4	300	---	10.6	250	---	0.3	250	---	0.4
350	4.1	8.1	350	2.9	8.4	350	5.6	9.0	300	---	13.2	350	---	10.2	300	---	0.6	300	---	- 0.1
400	3.4	8.4	400	4.2	8.5	400	5.2	8.6	350	---	12.6	400	---	10.6	350	---	0.7	350	---	- 0.3
450	3.7	8.6	450	3.7	8.6	450	4.5	8.7	400	---	12.1	450	---	11.4	400	---	0.8	400	---	- 0.5
500	2.8	8.6	500	3.6	8.6	500	5.3	8.8	450	---	11.4	460	---	10.8	425	---	0.8	450	---	- 0.5
550	3.4	8.4	550	3.3	8.6	550	3.6	9.0	500	---	11.1	500	---	11.8	450	---	0.6	480	---	0.2
600	3.3	8.2	600	3.2	8.6	600	4.2	8.9	550	---	10.9	550	---	11.8	500	---	0.2	500	---	0.1
650	2.4	8.1	650	4.8	8.2	650	5.0	8.8	600	---	10.7	600	---	11.6	550	---	- 0.2	525	---	- 1.0
700	4.4	7.9	700	4.8	8.2	700	5.4	8.8	625	---	11.2	650	---	11.4	600	---	- 0.6	550	---	0.2
750	5.0	8.0	705	5.2	8.5	750	5.6	8.8	650	---	10.9	700	---	11.2	650	---	- 1.0	590	---	- 0.4
800	5.4	8.2	750	5.4	8.2	800	5.4	8.4	670	---	10.8	750	---	10.9	700	---	- 1.3	600	---	0.9
850	5.2	7.8	800	5.4	8.1	850	5.3	8.1				800	---	10.6	750	---	- 1.8	650	---	0.6
900	4.9	7.5	850	5.2	7.8	900	5.5	8.1				850	---	10.3	800	---	- 2.1	700	---	0.3
950	4.9	7.2	900	5.3	7.6	950	5.7	8.3				900	---	10.0	850	---	- 2.2	750	---	- 0.1
1000	5.0	7.4	950	5.3	7.7	1000	5.1	8.2				950	---	9.7	900	---	- 2.2	800	---	- 0.2
1050	5.3	8.9	1000	5.2	8.2	1050	5.0	8.2				1000	---	9.4	950	---	- 2.1	850	---	- 0.5
1100	4.6	8.8	1050	5.0	8.6	1060	4.6	8.6				1010	---	9.3	1000	---	- 2.2	900	---	- 0.6
1150	4.2	8.6													1035	---	- 2.0	950	---	- 0.8
																		1000	---	- 1.2
																		1050	---	- 1.5
																		1075	---	- 1.4

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #65 25 March 1968 1122 EST Keystone			Ascn #66 25 March 1968 1413 EST Keystone			Ascn #67 26 March 1968 0653 EST Keystone			Ascn #68 26 March 1968 0808 EST Keystone			Ascn #69 26 March 1968 0906 EST Keystone			Ascn #70 26 March 1968 1006 EST Keystone			Ascn #71 26 March 1968 1129 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	1.7	2.8	Sfc	5.1	9.2	Sfc	---	---	Sfc	8.0	15.4
10	5.7	9.4	20	6.9	12.0	10	3.6	4.6	50	0.8	1.6	50	4.8	9.2	50	---	---	50	7.8	14.9
50	4.6	8.1	50	6.7	11.8	50	0.5	1.1	70	0.6	1.5	100	4.6	9.1	60	6.6	13.0	100	7.6	14.5
100	4.0	7.2	100	6.4	11.4	100	0.8	1.5	100	2.2	6.1	150	4.4	9.2	100	6.8	13.0	150	7.2	13.9
150	3.7	6.9	150	6.2	11.2	150	3.0	7.2	150	2.7	7.4	200	4.3	9.0	150	6.2	12.4	200	6.9	13.4
200	3.3	6.3	200	5.7	10.4	200	3.7	9.0	200	2.8	7.7	250	4.1	8.8	200	5.9	11.9	250	6.7	13.2
250	3.0	5.8	250	5.4	9.8	250	3.0	9.6	250	3.2	8.6	300	3.6	8.4	250	5.7	11.5	300	6.6	12.8
300	2.9	5.6	300	5.4	9.6	300	4.3	10.0	300	3.4	9.0	350	3.5	8.7	300	5.2	10.7	350	6.2	12.2
350	2.4	4.9	350	5.0	9.0	350	4.3	10.1	350	3.3	8.9	400	3.2	8.4	350	4.9	10.3	400	5.8	11.6
400	2.2	4.6	400	4.4	8.2	400	4.3	10.4	400	3.2	8.7	450	3.1	8.3	400	4.6	9.8	450	5.8	11.6
450	1.8	4.0	450	4.1	7.9	450	4.3	10.6	450	3.2	9.2	500	3.4	8.9	450	4.3	9.4	500	5.5	11.2
500	1.2	3.4	500	3.8	7.4	500	4.1	10.5	500	3.4	9.6	550	3.1	8.6	500	3.9	8.8	550	4.7	10.2
550	1.0	3.1	550	3.5	6.9	550	4.0	10.2	550	3.4	9.4	590	3.0	8.4	550	3.5	8.2	600	4.4	9.6
600	0.8	2.6	600	3.2	6.6	600	3.7	9.7	600	3.2	9.0				600	3.3	7.9	650	4.0	9.2
650	0.4	2.0	650	2.9	6.0	650	3.5	9.2	650	2.8	8.5				650	2.9	7.4	700	3.6	8.7
700	0.2	1.8	700	2.7	5.6	700	3.2	8.8	700	2.6	8.1				700	2.6	7.0	750	3.3	8.1
750	-0.2	1.4	750	2.1	4.8	750	3.1	8.5	750	2.3	7.6				750	2.3	6.6	800	2.8	7.5
800	-0.7	1.0	800	1.8	4.4	800	3.0	8.2	800	2.3	7.4				800	2.1	6.1	850	2.4	7.2
850	-1.1	0.3	850	1.4	3.9	850	2.9	7.9	850	2.1	6.9				850	2.0	6.0	900	1.9	6.6
900	---	0.0	900	1.0	3.2	900	2.6	7.4	900	1.9	6.5				900	1.7	5.5			
920	-1.2	0.8	950	0.7	2.8	950	2.3	7.0	950	1.6	6.1				950	1.1	5.3			
950	-1.2	0.4	1000	0.2	2.3	1000	1.9	6.5	1000	1.2	5.6				1000	1.0	5.2			
980	---	- 0.4	1035	0.1	2.1	1050	1.5	6.0	1050	1.0	5.2				1040	0.8	4.8			
1000	-1.7	0.2							1100	0.7	4.7									
1045	-1.8	0.5							1130	0.4	4.4									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #72 27 March 1968 0659 EST Keystone			Ascn #73 27 March 1968 0823 EST Keystone			Ascn #74 27 March 1968 1046 EST Keystone			Ascn #75 28 March 1968 0644 EST Keystone			Ascn #76 28 March 1968 0909 EST Keystone			Ascn #77 28 March 1968 1036 EST Keystone			Ascn #78 29 March 1968 0646 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	6.8	7.0	Sfc	8.6	9.4	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	11.0	12.4
25	4.7	5.0	10	8.6	9.4	20	12.2	16.7	12	7.3	8.7	10	10.3	15.8	20	13.2	19.6	20	9.8	11.2
50	6.7	7.2	25	7.9	8.6	50	12.5	16.7	20	7.7	9.2	20	10.7	16.2	50	12.8	19.1	50	10.1	11.9
100	8.2	8.9	50	8.0	8.9	100	12.5	16.4	50	5.3	6.1	40	10.1	15.5	100	12.7	18.7	80	9.8	11.6
150	8.6	9.8	100	8.7	9.9	150	12.0	15.8	70	5.3	6.2	50	10.0	15.4	150	12.4	18.2	100	10.7	12.9
200	8.8	10.2	150	8.7	10.2	200	11.9	15.6	100	7.1	9.6	100	9.8	15.0	200	11.9	17.5	150	10.7	12.9
250	9.1	10.8	200	8.8	10.5	250	11.9	15.4	150	7.5	11.3	150	9.8	14.8	250	11.5	16.9	200	11.0	13.4
300	9.4	11.2	250	8.7	10.6	300	11.5	14.8	200	7.9	12.5	200	9.3	14.3	300	11.3	16.5	250	11.3	13.8
350	9.6	11.4	300	8.8	10.8	350	11.0	14.1	250	9.0	14.9	250	8.9	13.6	350	11.1	16.1	300	11.5	13.9
400	9.7	11.5	350	8.8	11.2	400	10.8	13.6	300	9.6	15.7	300	8.8	13.5	400	10.6	15.4	350	11.7	14.1
440	7.5	11.5	400	8.8	11.2	450	10.5	13.2	350	10.2	16.2	350	8.8	13.4	450	10.3	14.9	400	11.6	13.8
450	9.4	11.8	450	9.0	11.2	500	10.4	13.0	400	10.5	16.1	400	8.8	13.2	500	10.1	14.6	450	11.5	13.5
470	8.6	13.0	500	9.0	11.0	550	9.7	12.2	450	10.4	15.8	450	8.8	13.2	550	9.9	14.2	500	11.1	12.9
500	8.1	13.2	550	8.4	11.0	600	9.3	11.4	500	10.4	15.4	500	8.8	13.0	600	9.5	13.6	550	11.2	13.0
550	7.3	13.1	565	7.6	11.4	650	9.2	11.1	550	10.1	15.0	550	9.1	13.0	650	9.1	13.0	600	11.2	12.7
600	7.0	12.8	570	8.1	11.4	700	8.3	11.3	600	9.9	14.6	600	9.0	12.7	700	8.8	12.6	650	11.6	13.2
650	6.6	12.2	580	8.6	10.8	750	8.2	11.2	650	9.6	14.1	650	8.8	12.2	750	8.6	12.0	700	11.7	13.9
700	6.3	11.8	600	8.4	10.6	800	8.1	10.1	700	9.5	13.9	700	8.7	11.8	800	8.1	11.5	750	11.3	13.6
750	6.0	11.4	620	8.0	10.6	850	8.0	9.4	750	9.2	13.6	750	9.6	12.3	850	7.8	10.9	800	11.0	13.2
800	5.7	11.1	650	6.7	11.5	900	7.3	10.2	800	9.0	13.2	800	9.6	12.3	900	7.2	10.2	850	10.5	12.9
850	5.4	10.6	700	6.0	11.4	950	7.6	9.7	850	8.8	12.8	850	8.3	10.9	950	7.1	9.8	900	10.0	12.6
900	5.1	10.2	750	5.5	10.9	1000	7.4	9.2	900	8.5	12.3	900	7.9	10.2	1000	6.8	9.4	950	9.4	12.2
950	5.0	9.8	800	5.2	10.6	1045	7.2	8.8	950	8.3	11.9	950	7.5	9.7	1030	6.8	9.3	1000	8.8	11.8
1000	4.7	9.4	850	5.0	10.2				1000	8.0	11.5	1000	6.9	9.4				1040	8.4	11.6
			900	4.7	9.8				1050	7.5	10.9	1040	6.7	9.5						
			950	4.5	9.4				1065	7.3	10.7									
			1000	4.1	8.8															
			1020	4.0	8.6															

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #79 29 March 1968 0831 EST Keystone			Ascn #80 29 March 1968 0944 EST Keystone			Ascn #81 29 March 1968 1106 EST Keystone			Ascn #82 30 March 1968 0645 EST Keystone			Ascn #83 30 March 1968 0840 EST Keystone			Ascn #84 30 March 1968 0921 EST Keystone			Ascn #85 30 March 1968 1052 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	5.2	7.6	Sfc	---	---	Sfc	---	---
10	12.8	16.0	20	13.8	17.8	10	15.7	21.4	10	3.6	4.4	50	4.8	7.0	15	5.9	10.3	20	6.4	12.8
50	12.9	16.0	50	13.5	17.4	50	15.4	21.0	20	5.0	5.6	80	4.3	7.7	30	6.4	10.8	50	8.1	12.5
100	12.6	15.6	100	13.4	17.2	100	15.2	20.4	50	1.9	2.2	100	4.3	7.6	50	5.9	10.3	100	5.6	11.8
150	12.2	15.1	150	13.3	17.0	150	14.8	19.8	60	1.9	2.2	150	4.3	7.5	100	5.1	9.8	150	5.6	11.8
200	12.0	14.6	200	13.2	16.6	200	14.5	19.3	100	3.0	3.8	200	4.1	7.2	150	4.9	9.4	200	4.9	11.0
250	11.7	14.2	250	13.0	16.1	250	14.2	18.8	150	3.8	6.2	250	3.5	7.3	200	4.7	9.0	250	4.9	10.9
300	11.5	13.8	300	12.8	15.8	300	14.1	18.6	200	4.0	7.8	300	2.6	7.8	250	4.6	8.6	300	4.6	10.4
350	11.3	13.5	350	13.6	16.3	350	13.6	17.8	250	3.7	8.5	350	2.2	7.6	300	4.5	8.2	350	4.3	10.0
400	11.2	13.2	400	12.2	14.8	400	13.5	17.5	280	3.3	8.7	400	2.0	7.4	350	4.1	7.9	400	4.2	9.8
450	10.9	12.7	450	11.9	14.3	450	13.1	16.7	300	3.2	8.6	450	1.6	7.1	400	3.8	7.4	450	3.6	9.0
500	10.4	12.1	500	11.7	13.9	500	12.6	16.1	350	2.9	8.4	500	1.3	6.7	450	2.7	7.4	500	3.4	8.6
550	10.1	11.6	550	11.3	13.5	550	12.0	15.4	400	2.7	8.3	550	1.0	6.3	500	2.2	7.0	550	3.1	8.2
600	10.3	11.7	600	11.0	13.0	600	12.0	15.2	450	2.4	8.2	600	0.7	5.8	540	2.7	6.2	600	2.4	7.4
650	10.2	11.6	650	10.5	12.5	650	12.0	15.0	500	2.0	7.8				550	1.8	6.3	650	2.3	7.2
685	11.0	12.4	700	10.0	12.0	700	11.7	14.6	550	1.9	7.5				600	1.3	6.5	700	2.0	6.6
700	10.6	11.9	720	10.0	12.0	750	11.4	14.1	600	1.7	7.2				650	0.7	6.1	750	1.7	6.3
720	9.8	10.8	750	10.1	13.9	800	10.9	13.5	650	1.3	6.7				700	0.5	5.8	800	1.4	5.8
			800	9.8	13.2	850	10.6	13.0	700	0.9	6.2				750	0.0	5.2	850	0.8	5.0
			850	9.6	13.8	880	10.5	12.5	750	0.6	5.8				770	0.0	5.1	900	0.4	4.4
			900	9.3	13.5				800	0.4	5.5							950	0.2	4.1
			950	9.1	13.4				850	0.1	5.1							1000	-0.1	3.6
			1000	8.8	13.1				900	0.0	4.7							1050	-0.5	3.2
			1050	8.6	12.6				950	-0.3	4.2							1060	-0.7	2.9
									1000	-0.3	3.9									
									1040	0.6	3.8									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #86 1 April 1968 0644 EST Keystone			Ascn #87 1 April 1968 0953 EST Keystone			Ascn #88 1 April 1968 1204 EST Keystone			Ascn #89 2 April 1968 0651 EST Keystone			Ascn #90 2 April 1968 0824 EST Keystone			Ascn #91 3 April 1968 0644 EST Keystone			Ascn #92 3 April 1968 0837 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	1.6	Sfc	---	2.8	Sfc	---	4.6	Sfc	---	---	Sfc	---	- 0.2	Sfc	5.0	7.0	Sfc	6.0	9.0
50	---	1.6	50	---	2.3	50	---	3.8	10	---	- 1.8	50	---	- 1.3	10	3.1	4.5	30	5.1	7.8
100	---	1.6	100	---	1.8	100	---	3.0	20	---	- 2.2	100	---	- 1.4	50	2.6	4.3	50	5.0	8.0
150	---	1.3	150	---	1.3	150	---	2.3	50	---	- 4.1	105	---	- 0.2	60	2.5	4.3	100	3.9	8.2
200	---	0.6	200	---	0.8	200	---	1.6	100	---	- 4.0	150	---	0.0	100	2.7	6.0	150	3.9	8.3
250	---	- 0.1	250	---	0.4	250	---	1.2	150	---	- 3.1	200	---	0.5	150	3.0	7.0	200	4.5	9.7
300	---	- 0.3	300	---	- 0.3	300	---	0.8	200	---	0.8	250	---	2.0	200	4.7	10.2	230	4.8	11.0
350	---	- 0.7	350	---	- 0.7	350	---	0.4	220	---	1.8	300	---	2.4	250	4.8	10.7	250	4.9	11.1
400	---	- 1.2	400	---	- 1.5	400	---	0.0	250	---	2.1	350	---	2.5	300	4.8	10.9	300	5.3	11.3
450	---	- 1.8	450	---	- 1.8	450	---	- 0.6	300	---	2.8	400	---	2.6	350	5.0	11.0	350	5.4	11.2
500	---	- 2.1	500	---	- 2.2	500	---	- 1.0	350	---	3.0	450	---	2.3	400	5.5	11.2	400	5.3	10.9
550	---	- 2.6	550	---	- 2.7	550	---	- 1.5	400	---	3.0	500	---	1.9	450	5.4	11.0	450	5.2	10.6
600	---	- 3.0	600	---	- 3.2	600	---	- 1.9	450	---	3.1	550	---	1.5	500	5.0	10.6	500	5.1	10.3
650	---	- 3.5	650	---	- 3.8	650	---	- 2.0	500	---	2.9	600	---	1.2	550	4.6	10.1	550	4.8	9.8
700	---	- 3.9	700	---	- 4.2	700	---	- 2.4	550	---	2.5	650	---	0.8	600	4.0	9.8	600	4.7	9.4
750	---	- 4.6	750	---	- 4.6	750	---	- 3.2	600	---	2.0	700	---	0.6	650	3.7	9.6	650	4.8	9.1
800	---	- 5.0	800	---	- 5.2	800	---	- 3.7	650	---	1.6	730	---	0.4	700	3.4	9.3	700	5.0	9.0
850	---	- 5.4	850	---	- 5.6	850	---	- 3.9	700	---	1.2				750	3.3	9.1	750	4.7	8.7
900	---	- 5.2	900	---	- 6.2	900	---	- 4.2	750	---	1.0				800	3.0	8.7	800	4.3	8.4
950	---	- 4.7	950	---	- 6.5	950	---	- 5.3	800	---	0.8				850	3.6	8.6	850	3.8	7.8
1000	---	- 4.7	1000	---	- 6.6	1000	---	- 5.8	850	---	0.5				900	5.1	8.3	900	3.6	7.4
1050	---	- 4.5	1050	---	- 7.3	1050	---	- 6.4	900	---	0.3				950	5.0	8.1	930	3.5	7.2
1100	---	- 4.6							950	---	- 0.2				1000	4.7	7.7			
1130	---	- 4.6							1000	---	- 0.5				1050	4.7	7.4			
									1050	---	- 0.4				1060	4.7	7.3			

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #93 3 April 1968 0947 EST Keystone			Ascn #94 3 April 1968 1106 EST Keystone			Ascn #95 4 April 1968 0646 EST Keystone			Ascn #96 4 April 1968 0814 EST Keystone			Ascn #97 10 April 1968 0645 EST Keystone			Ascn #98 10 April 1968 0700 EST Keystone			Ascn #99 10 April 1968 0715 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	8.4	15.0	Sfc	9.4	16.0	Sfc	14.9	19.2	Sfc	14.3	15.6	Sfc	---	---	Sfc	2.6	3.4	Sfc	2.0	2.8
50	7.9	13.9	50	9.6	16.2	50	15.0	19.3	50	14.3	15.9	10	1.6	2.0	20	2.5	3.0	20	2.2	2.8
100	7.4	13.4	100	9.0	15.4	100	14.9	19.2	100	14.1	15.8	50	-0.3	0.1	30	0.2	0.7	25	0.4	1.0
150	7.1	13.0	150	8.8	15.1	150	14.6	18.7	150	14.0	15.5	80	---	- 0.1	50	-0.2	0.3	50	-0.2	0.4
200	6.8	12.6	200	8.5	14.6	200	14.4	18.4	200	13.6	14.9	100	-0.2	0.3	70	---	- 0.2	80	---	0.0
250	6.6	12.2	250	8.3	14.2	250	14.1	17.9	250	13.4	14.6	150	2.4	4.6	100	1.0	2.6	100	0.3	1.6
300	6.2	11.6	300	7.7	13.4	300	14.0	17.6	300	13.1	14.3	200	4.2	7.2	150	2.6	5.0	150	2.3	4.6
350	6.1	11.4	350	7.4	13.0	350	13.7	17.2	350	13.0	14.1	210	4.4	7.8	200	3.9	7.6	200	3.5	7.3
400	5.7	10.8	400	7.2	12.6	400	13.4	16.9	400	12.8	13.8	250	4.7	8.2	230	4.0	7.8	250	3.6	7.5
450	5.4	10.4	450	6.9	12.2	450	13.1	16.3	450	12.4	13.3	300	4.4	8.0	250	4.0	7.8	300	3.5	7.4
500	5.1	10.0	500	6.5	11.7	500	12.9	16.0	500	12.1	13.0	350	4.3	7.8	300	3.8	7.6	350	3.4	7.3
550	4.8	9.4	550	6.1	11.1	550	12.7	15.7	550	12.2	13.0	400	4.0	7.4	350	3.7	7.4	400	3.1	6.9
600	4.6	9.1	600	5.8	10.6	600	12.3	15.0	600	11.8	12.5	450	3.7	7.1	400	3.4	7.2	450	3.0	6.8
650	4.6	8.8	650	5.5	10.1	650	12.1	14.6	650	11.6	12.4	500	3.5	7.2	450	3.3	7.1	500	2.8	6.8
700	4.8	8.6	700	5.1	9.5	700	11.9	14.3	700	11.5	12.3	550	3.4	7.4	500	3.1	6.9	550	2.5	6.7
750	4.8	8.4	750	4.8	9.0	750	11.7	14.0	750	11.5	12.3	600	3.2	7.4	550	2.7	6.7	600	2.3	6.6
			800	4.5	8.6	800	11.4	13.5	770	11.5	12.4	650	3.0	7.3	600	2.6	6.6	650	2.0	6.7
			850	4.2	8.0	850	11.0	12.9				700	2.9	7.3	650	2.3	6.7	700	2.2	6.7
			900	3.9	7.6	900	10.8	12.5				750	3.2	7.0	700	1.9	6.7	750	2.1	6.4
			950	3.3	6.9	950	11.1	12.9				800	2.8	6.6	750	2.4	6.6	800	1.8	6.1
			1000	3.0	6.4	1000	10.8	12.4				850	2.5	6.3	800	2.3	6.3	850	1.5	5.7
			1050	3.2	6.3	1050	10.6	12.1				900	2.2	5.9	850	1.9	5.9	900	1.3	5.4
			1100	3.7	6.4	1060	10.6	12.0				950	1.9	5.5	900	1.7	5.6	950	1.2	5.0
												1000	1.6	5.0	950	1.3	5.1	1000	1.7	4.6
												1050	1.6	4.6	1000	1.2	4.8	1050	1.5	4.2
												1100	1.6	4.3	1050	1.4	4.4	1090	1.3	4.0
												1150	1.1	3.8	1080	1.5	4.2			
												1200	0.8	3.4						
												1250	0.4	2.9						
												1300	-0.1	2.4						
												1350	-0.5	1.9						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #100 10 April 1968 0730 EST Keystone			Ascn #101 10 April 1968 0745 EST Keystone			Ascn #102 10 April 1968 0800 EST Keystone			Ascn #103 10 April 1968 0815 EST Keystone			Ascn #104 10 April 1968 0937 EST Keystone			Ascn #105 10 April 1968 1030 EST Keystone			Ascn #106 11 April 1968 0730 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	2.4	3.4	Sfc	2.4	3.4	Sfc	3.4	4.8	Sfc	4.6	6.4	Sfc	7.4	13.2	Sfc	7.9	13.9	Sfc	---	---
20	2.5	3.4	10	2.2	3.2	20	1.9	3.2	25	3.0	4.4	50	6.8	12.3	50	8.0	13.9	10	1.7	2.9
30	0.6	1.4	20	1.3	2.2	50	1.7	2.9	50	2.7	4.4	100	6.4	11.8	85	8.0	13.8	50	1.8	2.8
50	0.2	1.0	50	0.8	1.8	70	1.6	2.9	100	3.3	5.7	150	5.9	11.2	100	7.4	13.0	100	1.6	2.5
90	0.1	0.8	70	0.8	1.8	100	2.7	5.1	150	3.6	6.6	200	5.7	10.8	150	7.3	12.7	150	1.4	2.2
100	0.6	2.0	100	1.9	3.9	150	3.3	6.2	200	3.9	7.3	250	5.6	10.5	200	6.8	12.2	200	1.3	2.2
150	2.4	4.7	150	2.9	5.7	200	3.5	7.3	230	4.0	8.2	300	5.0	9.8	250	6.5	11.7	250	1.0	1.8
200	3.4	6.8	200	3.7	7.6	210	3.7	7.9	250	3.9	8.2	350	4.7	9.4	300	6.2	11.2	275	1.4	2.2
210	3.6	7.4	250	3.6	7.7	250	3.6	7.9	300	3.7	8.1	400	4.5	9.0	350	5.7	10.6	290	1.2	2.0
250	3.6	7.6	300	3.4	7.6	300	3.5	7.8	350	3.5	7.9	450	4.2	8.4	400	5.3	10.1	300	1.4	2.2
300	3.4	7.5	350	3.3	7.5	350	3.5	7.8	400	3.3	7.7	500	3.9	8.0	450	5.0	9.6	325	2.0	3.2
350	3.3	7.4	400	3.2	7.4	400	3.3	7.6	450	3.1	7.5	550	3.5	7.7	500	4.7	9.2	350	1.9	3.2
400	3.1	7.1	450	3.0	7.3	450	3.0	7.4	500	2.8	7.4	600	3.2	7.2	550	4.3	8.7	400	1.7	3.0
450	2.9	7.0	500	2.7	7.0	500	2.8	7.2	550	2.5	7.1	650	2.8	6.7	600	4.1	8.3	450	1.6	2.8
500	2.7	6.9	550	2.5	7.1	550	2.5	7.0	600	2.2	6.9	700	2.6	6.4	650	3.7	7.7	500	1.4	2.6
550	2.6	7.0	600	2.4	7.0	600	2.3	6.9	650	2.3	7.0	750	2.5	6.1	700	3.3	7.2	550	1.0	2.2
600	2.4	6.9	650	2.5	7.1	650	2.5	7.0	700	2.2	6.9	800	2.0	5.6	750	3.0	6.8	600	0.7	2.1
650	2.1	6.9	700	2.3	6.8	700	2.2	6.8	750	2.6	6.5	850	2.2	5.6	800	2.5	6.2	650	0.4	1.7
700	2.3	6.7	750	1.9	6.5	750	2.1	6.5	800	2.6	6.2	900	1.5	4.7	850	2.3	5.9	700	0.1	1.3
750	2.1	6.4	800	1.6	6.1	800	2.2	6.1	850	2.4	5.7	950	1.2	4.3	900	2.1	5.5	750	-0.4	0.8
800	1.8	6.1	850	2.3	5.7	850	2.2	5.8	900	2.2	5.2	1000	0.8	3.8	950	1.8	5.1	800	0.0	0.4
850	1.4	5.8	900	2.2	5.4	900	2.2	5.4	950	1.9	4.9	1050	0.7	3.6	1000	1.3	4.5	850	---	0.0
900	2.1	5.5	950	2.0	5.0	950	2.1	5.1	1000	1.6	4.5	1100	0.7	3.5	1050	1.0	4.0	900	---	- 0.4
950	2.1	5.1	1000	1.7	4.7	1000	1.8	4.7	1050	1.3	4.2	1150	0.5	3.3	1100	0.6	3.5	950	---	- 0.8
1000	1.7	4.6	1050	1.5	4.4	1050	1.5	4.4	1100	1.3	4.2	1200	0.0	2.9	1150	0.3	3.1	1000	---	- 1.2
1050	1.4	4.2	1100	1.1	4.0	1085	1.2	4.1	1125	0.9	3.8	1250	-0.4	2.6	1200	0.1	2.7	1050	---	- 1.6
1090	1.0	3.8	1150	0.6	3.4							1300	-0.8	2.2	1250	-0.3	2.4	1100	---	- 1.8
			1200	0.4	3.2							1350	-1.2	1.7	1300	-0.7	1.9	1150	---	- 1.8
			1250	0.1	2.7							1370	-1.4	1.5	1350	-1.0	1.4	1200	---	- 1.9
			1300	-0.4	2.2										1380	-1.3	1.1	1250	---	- 2.0
			1350	-0.9	1.6													1300	---	- 2.2
			1380	-1.1	1.4													1350	---	- 2.2
																		1370	---	- 2.4

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #107 11 April 1968 0745 EST Keystone			Ascn #108 11 April 1968 0800 EST Keystone			Ascn #109 11 April 1968 0815 EST Keystone			Ascn #110 11 April 1968 0830 EST Keystone			Ascn #111 11 April 1968 0845 EST Keystone			Ascn #112 11 April 1968 0900 EST Keystone			Ascn #113 11 April 1968 0915 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	2.4	3.4	Sfc	2.3	3.9	Sfc	2.4	4.2	Sfc	3.1	5.0	Sfc	3.6	5.7	Sfc	3.1	5.8	Sfc	3.4	6.2
50	2.3	3.1	50	2.2	3.5	50	2.6	4.0	50	3.0	4.6	50	3.4	5.2	50	3.0	5.4	50	3.5	5.9
100	2.0	2.7	100	2.1	3.3	100	2.6	4.0	100	3.0	4.6	100	3.2	5.0	100	3.0	5.2	100	3.3	5.6
130	2.1	2.8	150	2.0	3.0	150	2.4	3.6	150	2.5	4.2	150	3.2	4.8	150	2.8	4.9	150	3.3	5.4
150	2.0	2.7	200	1.7	2.6	200	2.2	3.2	200	2.2	3.8	200	2.6	4.2	200	2.4	4.3	200	3.2	5.2
200	1.7	2.4	250	1.4	2.3	250	1.8	2.8	250	2.2	3.4	250	2.4	3.8	250	2.4	4.1	250	3.0	4.8
250	1.3	2.1	270	1.6	2.6	300	1.5	2.6	300	1.8	2.8	300	1.8	3.4	300	1.7	3.5	300	2.4	3.9
300	2.1	3.0	300	1.3	2.3	350	1.2	2.3	350	1.7	2.6	350	2.0	3.2	350	1.6	3.3	350	2.2	3.6
350	1.8	2.8	340	1.2	2.0	400	1.0	2.0	400	1.0	2.4	400	1.2	2.6	400	1.2	2.9	400	1.6	3.0
400	1.4	2.7	350	1.0	1.9	450	0.7	1.8	450	0.7	1.6	450	0.9	2.5	450	1.1	2.5	450	1.2	2.6
450	1.2	2.6	400	1.0	2.1	490	0.6	2.0	470	0.8	2.4	500	0.8	2.6	465	0.9	2.2	500	0.8	2.2
500	1.2	2.2	450	1.0	2.6	500	0.7	2.4	500	0.7	1.6	550	0.5	2.3	480	1.0	2.4	550	0.4	1.8
550	0.9	1.9	500	0.8	2.6	550	0.3	2.3	530	0.4	1.2	600	0.2	2.8	500	1.2	2.0	600	0.3	1.3
600	0.5	1.9	550	0.7	2.3	600	0.0	1.9	550	0.4	2.3	650	-0.2	1.2	550	0.2	1.0	610	0.2	1.6
650	0.2	1.6	600	0.4	1.9	650	-0.4	1.4	600	0.0	1.8	700	-0.5	0.9	575	0.5	1.9	650	0.0	1.4
700	-0.1	1.1	650	0.2	1.6	700	-0.2	1.0	650	-0.2	1.4	750	-0.9	0.4	600	0.1	0.9	700	-0.3	0.9
750	-0.3	0.8	700	-0.3	1.1	750	-0.3	0.6	700	-0.4	1.1	800	---	- 0.1	615	0.0	0.4	750	-0.8	0.5
800	0.0	0.5	750	-0.4	0.6	800	-0.8	0.1	750	-0.6	0.6	850	---	- 0.5	650	-0.4	1.1	800	-1.1	0.1
850	---	- 0.1	800	-0.5	0.2	850	---	- 0.5	800	-0.4	0.1	900	---	- 0.9	700	-0.6	0.6	850	---	- 0.3
900	---	- 0.5	850	---	- 0.2	900	---	- 1.0	850	---	- 0.4	950	---	- 1.3	750	-1.0	0.2	900	---	- 0.9
950	---	- 1.0	900	---	- 0.7	950	---	- 1.4	900	---	- 0.6	1000	---	- 1.2	800	---	- 0.2	950	---	- 1.3
1000	---	- 1.4	950	---	- 1.2	1000	---	- 1.9	950	---	- 1.0	1050	---	- 1.1	850	---	- 0.6	1000	---	- 1.7
1030	---	- 1.7	1000	---	- 1.7	1050	---	- 2.4	1000	---	- 1.1	1060	---	- 1.2	900	---	- 1.0	1050	---	- 2.0
1050	---	- 1.6	1050	---	- 2.1				1050	---	- 1.0				950	---	- 1.4	1070	---	- 2.2
1080	---	- 1.8	1070	---	- 2.2				1100	---	- 1.2				1000	---	- 2.0	1100	---	- 2.0
									1150	---	- 1.4				1050	---	- 2.1	1110	---	- 2.0
									1200	---	- 1.4				1060	---	- 1.8			
									1250	---	- 1.7									
									1300	---	- 2.0									
									1350	---	- 2.5									
									1360	---	- 2.6									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #114 12 April 1968 0649 EST Keystone			Ascn #115 12 April 1968 0700 EST Keystone			Ascn #116 12 April 1968 0715 EST Keystone			Ascn #117 12 April 1968 0730 EST Keystone			Ascn #118 12 April 1968 0745 EST Keystone			Ascn #119 12 April 1968 0830 EST Keystone			Ascn #120 12 April 1968 0845 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	2.4	2.8	Sfc	---	3.0	Sfc	1.7	2.5	Sfc	2.2	3.0	Sfc	2.5	3.4	Sfc	---	7.2	Sfc	---	8.2
30	---	0.4	20	---	0.2	10	1.6	2.2	50	0.0	0.6	10	1.2	2.0	15	---	7.0	50	---	8.1
50	---	0.0	50	---	- 0.1	20	0.4	0.8	70	-0.2	0.4	50	0.7	1.4	20	---	6.4	100	---	8.0
100	---	0.3	100	---	- 0.2	50	-0.2	0.2	100	-0.1	0.6	80	0.8	2.0	50	---	5.9	150	---	7.7
150	1.5	3.5	150	1.4	3.6	60	---	0.0	150	1.5	3.8	100	1.3	2.9	100	---	6.5	200	---	7.1
200	2.1	5.1	200	2.6	5.6	100	-0.4	0.2	200	2.1	5.0	150	1.9	4.2	150	---	6.6	250	---	8.0
220	3.0	7.0	210	3.5	7.2	150	1.1	3.3	240	3.6	7.6	200	2.6	5.7	200	---	6.7	300	---	8.5
250	4.2	8.0	250	4.0	8.1	200	2.5	5.6	250	3.6	7.8	250	3.5	7.6	250	---	7.7	350	---	8.7
300	4.3	8.5	300	4.3	8.7	220	3.2	7.0	300	3.8	8.2	300	3.7	8.3	300	---	8.5	400	---	8.6
350	4.3	8.8	350	4.2	8.8	250	3.7	7.8	350	3.8	8.2	350	3.8	8.4	315	---	8.8	450	---	8.3
400	4.3	8.8	400	4.1	8.6	300	3.9	8.5	400	3.7	8.2	400	3.7	8.3	350	---	8.7	500	---	8.2
450	4.2	8.7	450	4.0	8.6	350	4.0	8.6	450	3.5	8.0	450	3.6	8.2	400	---	8.5	550	---	7.9
500	4.1	8.5	500	3.9	8.3	400	3.8	8.4	500	3.4	7.8	500	3.4	7.9	450	---	8.2	600	---	7.6
550	4.0	8.3	550	3.8	8.0	450	3.6	8.2	550	3.1	7.5	550	3.2	7.6	500	---	7.8	650	---	7.3
600	3.8	8.0	600	3.4	7.6	500	3.6	8.0	600	2.9	7.2	600	3.0	7.3	550	---	7.7	700	---	7.0
650	3.6	7.6	650	3.5	7.3	550	3.4	7.8	650	2.6	6.8	650	2.8	7.1	600	---	7.4	750	---	6.9
700	3.5	7.2	700	3.0	6.9	600	3.3	7.5	700	2.4	6.6	700	2.6	6.8	650	---	7.0	800	---	6.7
750	3.0	6.9	750	2.6	6.6	650	2.9	7.1	750	2.1	6.3	750	2.4	6.4	700	---	6.8	850	---	6.5
800	2.6	6.6	800	2.2	6.2	700	2.7	6.9	800	2.1	6.0	800	2.2	6.0	750	---	6.4	900	---	6.2
850	2.4	6.3	850	2.1	5.9	750	2.3	6.5	850	2.0	5.7	850	2.0	5.7	800	---	6.2	950	---	6.0
900	2.5	6.0	900	2.0	5.5	800	2.1	6.2	900	2.1	5.6	900	2.2	5.6	850	---	6.0	1000	---	5.7
			950	1.9	5.3	850	2.1	5.8	950	2.1	5.3	950	2.2	5.4	900	---	5.8	1050	---	5.2
			1000	1.8	5.0	900	1.9	5.4	1000	2.3	5.3	1000	2.3	5.4	950	---	5.7	1070	---	5.2
			1050	2.0	5.0	950	1.7	5.1	1050	2.0	5.2	1050	2.1	5.2	1000	---	5.5	1100	---	5.4
			1100	2.1	4.9	1000	1.9	5.0				1080	1.9	5.3	1050	---	5.1	1150	---	6.6
			1150	1.9	4.8	1050	2.0	4.9				1100	0.6	6.2	1100	---	5.4	1200	---	6.8
			1180	0.0	5.8							1150	0.8	6.6	1110	---	5.6	1250	---	6.5
			1200	0.6	6.2							1200	1.7	6.4				1300	---	6.6
			1250	1.5	6.1							1250	2.6	6.4				1350	---	6.6
			1300	2.4	6.0							1300	2.6	6.5				1375	---	6.6
			1350	2.3	5.9							1350	2.4	6.4						
												1400	2.2	6.5						
												1410	2.2	6.6						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #121 12 April 1968 0900 EST Keystone			Ascn #122 12 April 1968 0915 EST Keystone			Ascn #123 12 April 1968 0930 EST Keystone			Ascn #124 12 April 1968 0945 EST Keystone			Ascn #125 12 April 1968 1000 EST Keystone			Ascn #126 5 May 1968 0538 EST Keystone			Ascn #127 5 May 1968 0818 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	9.8	Sfc	---	11.0	Sfc	---	12.0	Sfc	---	12.6	Sfc	---	---	Sfc	---	6.9	Sfc	---	8.8
50	---	9.7	50	---	10.8	50	---	11.6	50	---	12.6	10	---	13.3	50	---	6.8	50	---	7.7
100	---	9.5	100	---	10.6	100	---	11.1	100	---	12.1	50	---	13.0	100	---	6.6	100	---	7.1
150	---	9.0	150	---	10.2	150	---	11.1	150	---	11.4	100	---	12.4	150	---	6.4	150	---	6.9
200	---	8.5	200	---	9.7	200	---	10.4	200	---	11.3	125	---	12.1	200	---	5.9	200	---	6.3
250	---	8.4	250	---	9.3	250	---	10.0	250	---	11.1	150	---	12.6	250	---	5.8	250	---	6.0
300	---	8.2	300	---	8.9	300	---	9.5	300	---	10.5	200	---	11.6	300	---	5.5	300	---	5.4
350	---	8.3	350	---	8.2	350	---	9.1	350	---	10.0	250	---	11.1	350	---	5.3	350	---	5.2
400	---	8.5	400	---	8.7	400	---	8.9	400	---	9.6	300	---	10.4	400	---	5.5	400	---	5.0
450	---	8.3	450	---	8.4	450	---	8.3	450	---	9.1	350	---	10.2	450	---	5.4	450	---	4.7
500	---	8.1	500	---	8.2	500	---	8.3	500	---	8.6	400	---	9.9	500	---	5.0	500	---	4.6
550	---	7.9	550	---	7.9	550	---	8.2	550	---	8.4	450	---	9.5	550	---	4.9	550	---	4.5
600	---	7.7	600	---	7.8	600	---	8.1	600	---	8.2	500	---	8.8	600	---	4.8	600	---	4.6
650	---	7.3	650	---	7.5	650	---	7.7	650	---	8.0	550	---	8.4	650	---	4.9	650	---	4.6
700	---	7.0	700	---	7.2	700	---	7.3	700	---	7.9	600	---	8.0	700	---	5.3	700	---	4.7
750	---	6.9	750	---	6.8	750	---	7.0	750	---	7.6	650	---	7.6	750	---	5.0	750	---	4.5
800	---	6.6	800	---	6.6	800	---	6.8	800	---	7.0	700	---	7.3	800	---	4.8	800	---	4.4
850	---	6.2	850	---	6.5	850	---	6.4	850	---	6.3	730	---	8.1	850	---	4.6	850	---	3.9
900	---	6.2	900	---	6.4	900	---	6.3	900	---	6.6	750	---	7.9	900	---	4.7	900	---	3.5
950	---	6.0	950	---	6.2	950	---	6.1	950	---	6.6	800	---	7.4	940	---	4.5	950	---	3.3
1000	---	5.8	1000	---	5.8	1000	---	5.8	1000	---	7.2	850	---	6.7	950	---	4.9	1000	---	3.0
1050	---	5.6	1050	---	6.2	1050	---	5.7	1030	---	8.0	900	---	6.7	1000	---	4.7	1030	---	2.6
1070	---	5.8	1060	---	6.6	1080	---	7.2	1050	---	7.8	950	---	6.9	1050	---	4.3			
						1100	---	7.0	1100	---	7.6	1000	---	6.8						
						1150	---	7.1	1110	---	7.6	1030	---	6.8						
						1200	---	6.8				1050	---	7.6						
						1250	---	6.8				1100	---	7.4						
						1300	---	7.0				1110	---	7.2						
						1350	---	6.9				1120	---	5.8						
						1370	---	6.9				1150	---	6.8						
												1200	---	7.3						
												1250	---	6.9						
												1300	---	6.6						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #128 5 May 1968 0939 EST Keystone			Ascn #129 6 May 1968 0551 EST Keystone			Ascn #130 6 May 1968 0752 EST Keystone			Ascn #131 6 May 1968 0845 EST Keystone			Ascn #132 6 May 1968 0943 EST Keystone			Ascn #133 7 May 1968 0543 EST Keystone			Ascn #134 7 May 1968 0714 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	8.7	Sfc	---	13.0	Sfc	---	14.8	Sfc	---	16.6	Sfc	---	18.4	Sfc	---	- 0.6	Sfc	---	- 0.2
50	---	8.4	50	---	11.6	50	---	14.4	50	---	16.2	50	---	17.8	20	---	- 1.8	50	---	- 0.2
100	---	7.8	90	---	12.6	100	---	14.1	100	---	15.9	100	---	17.6	50	---	- 2.0	100	---	- 0.2
150	---	7.2	100	---	12.6	150	---	13.8	150	---	15.5	150	---	17.5	65	---	- 2.3	150	---	2.7
200	---	6.9	150	---	12.8	200	---	13.2	200	---	15.2	200	---	16.7	100	---	- 0.6	200	---	3.1
250	---	6.6	200	---	12.9	250	---	12.7	250	---	14.8	250	---	16.3	150	---	3.2	250	---	3.2
300	---	6.2	250	---	13.2	300	---	12.3	300	---	14.3	300	---	15.8	200	---	4.1	300	---	3.3
350	---	5.6	300	---	13.0	350	---	12.0	350	---	13.8	350	---	15.7	250	---	4.2	350	---	3.7
400	---	5.1	350	---	12.8	400	---	11.6	400	---	13.4	400	---	15.0	300	---	4.5	400	---	4.1
450	---	4.6	390	---	12.5	450	---	11.3	450	---	13.0	450	---	14.6	350	---	4.8	450	---	4.0
500	---	4.4	400	---	12.8	500	---	11.0	500	---	12.5	500	---	14.0	400	---	5.0	500	---	4.0
550	---	4.0	450	---	13.5	505	---	11.6	550	---	11.9	550	---	13.9	450	---	4.9	550	---	3.8
580	---	3.7	490	---	14.0	550	---	12.1	600	---	11.6	600	---	13.4	500	---	4.9	600	---	3.4
			500	---	14.0	600	---	12.0	650	---	11.2	650	---	12.9	550	---	4.6	650	---	3.2
			550	---	13.8	650	---	11.7	700	---	11.1	700	---	12.4	600	---	4.2	700	---	2.7
			600	---	13.5	700	---	11.4	750	---	11.0	750	---	11.7	650	---	3.7	750	---	2.2
			650	---	13.1	750	---	11.0	800	---	10.5	800	---	11.3	700	---	3.4	800	---	1.9
			700	---	12.9	800	---	10.7	850	---	10.0	850	---	10.7	750	---	3.1	850	---	1.5
			750	---	12.6	850	---	10.2	900	---	9.6	900	---	10.1	800	---	2.6	900	---	1.1
			800	---	12.2	900	---	9.7	950	---	9.1	950	---	9.4	850	---	2.1	950	---	0.7
			850	---	11.5	950	---	9.4	1000	---	8.6	1000	---	9.1	900	---	1.6	1000	---	0.2
			900	---	11.0	1000	---	9.0	1050	---	8.7	1050	---	8.6	950	---	1.3	1050	---	- 0.3
			950	---	10.6	1050	---	8.9	1100	---	7.7	1080	---	8.3	1000	---	0.7	1080	---	- 0.6
			1000	---	10.0	1080	---	8.8	1150	---	7.3				1050	---	0.4			
			1040	---	9.6				1200	---	7.8									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #135 7 May 1968 0759 EST Keystone			Ascn #136 7 May 1968 1017 EST Keystone			Ascn #137 8 May 1968 0548 EST Keystone			Ascn #138 8 May 1968 0718 EST Keystone			Ascn #139 8 May 1968 0829 EST Keystone			Ascn #140 8 May 1968 1032 EST Keystone			Ascn #141 9 May 1968 0544 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	5.0	Sfc	---	10.7	Sfc	---	6.6	Sfc	---	7.8	Sfc	---	15.0	Sfc	---	19.6	Sfc	---	14.6
50	---	4.1	50	---	10.1	20	---	4.2	25	---	6.5	50	---	14.6	50	---	19.1	50	---	14.5
85	---	3.8	100	---	9.8	50	---	4.0	50	---	8.0	100	---	14.8	100	---	18.6	100	---	14.3
100	---	4.0	150	---	9.3	100	---	9.4	100	---	9.4	140	---	14.7	150	---	18.2	150	---	14.0
150	---	4.2	200	---	8.9	150	---	10.9	150	---	10.8	150	---	14.3	200	---	17.6	200	---	14.2
200	---	4.3	250	---	8.4	200	---	11.4	200	---	11.0	200	---	13.9	250	---	17.2	250	---	14.4
250	---	4.4	300	---	8.0	250	---	11.6	250	---	11.0	250	---	13.8	280	---	17.6	300	---	14.7
300	---	4.7	350	---	7.8	300	---	11.7	300	---	11.4	300	---	13.1	300	---	16.7	350	---	15.0
350	---	4.9	400	---	7.3	350	---	11.5	350	---	11.6	350	---	12.9	350	---	16.2	400	---	15.1
400	---	5.0	450	---	6.9	400	---	11.3	400	---	11.8	400	---	12.6	400	---	15.6	450	---	14.7
450	---	4.7	500	---	6.4	450	---	11.0	450	---	11.9	450	---	12.4	450	---	15.1	500	---	14.4
500	---	4.5	550	---	6.0	500	---	10.8	480	---	12.0	500	---	12.1	500	---	14.7	550	---	14.1
550	---	4.2	600	---	5.6	550	---	11.0	500	---	11.8	550	---	11.7	550	---	14.2	600	---	13.9
600	---	3.8	650	---	5.2	600	---	10.8	550	---	11.7	600	---	11.2	600	---	13.7	650	---	13.7
620	---	3.4	700	---	4.8	650	---	11.0	600	---	11.4	650	---	10.8	650	---	13.2	700	---	13.4
			750	---	4.4	700	---	11.2	650	---	11.0	700	---	10.6	700	---	13.0	750	---	13.0
			800	---	3.8	750	---	11.0	700	---	10.7	750	---	10.4	710	---	12.8	800	---	13.1
			850	---	3.2	800	---	10.5	750	---	10.4	800	---	10.1				850	---	12.8
			900	---	2.8	850	---	10.0	800	---	10.2	850	---	10.0				900	---	12.8
			950	---	2.3	900	---	9.6	850	---	10.1	900	---	9.6				950	---	12.4
			1000	---	1.8	950	---	9.2	900	---	9.7	950	---	9.7				1000	---	12.1
			1050	---	1.1	1000	---	9.0	950	---	9.4	1000	---	9.6				1050	---	11.9
						1040	---	8.6	1000	---	9.1	1025	---	9.4				1065	---	11.8
									1030	---	8.8									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #142 9 May 1968 0756 EST Keystone			Ascn #143 10 May 1968 0633 EST Keystone			Ascn #144 10 May 1968 0857 EST Keystone			Ascn #145 10 May 1968 0929 EST Keystone			Ascn #146 10 May 1968 1053 EST Keystone			Ascn #147 11 May 1968 0536 EST Keystone			Ascn #148 11 May 1968 0751 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	15.2	Sfc	---	14.6	Sfc	---	15.0	Sfc	---	15.0	Sfc	---	16.1	Sfc	---	11.8	Sfc	---	11.0
50	---	15.1	50	---	14.4	50	---	14.7	50	---	14.7	50	---	15.6	15	---	10.7	50	---	10.7
100	---	14.9	100	---	14.1	100	---	14.2	100	---	14.4	100	---	15.4	50	---	10.6	100	---	10.5
150	---	14.9	150	---	13.7	150	---	13.9	150	---	14.0	150	---	15.0	100	---	10.7	110	---	10.4
200	---	14.6	200	---	13.6	200	---	13.4	200	---	13.4	200	---	14.3	150	---	11.8	150	---	11.8
250	---	14.4	250	---	13.5	250	---	13.0	250	---	13.0	250	---	13.9	200	---	13.6	200	---	12.0
300	---	14.3	300	---	13.7	300	---	12.5	300	---	12.6	300	---	13.3	250	---	14.2	250	---	11.8
350	---	14.0	350	---	13.5	350	---	12.0	350	---	12.2	350	---	12.9	300	---	14.8	300	---	11.6
400	---	14.1	400	---	13.3	400	---	11.5	400	---	11.8	400	---	12.5	350	---	14.6	350	---	11.4
450	---	14.2	450	---	13.1	450	---	12.1	450	---	11.2	450	---	12.0	400	---	14.2	400	---	11.2
500	---	14.4	500	---	12.8	500	---	11.9	500	---	10.7	500	---	11.4	450	---	13.8	450	---	11.0
550	---	14.2	550	---	12.6	550	---	11.5	550	---	10.1	550	---	10.9	500	---	13.5	500	---	10.8
600	---	13.8	600	---	12.2	600	---	11.0	600	---	9.6	600	---	10.4	550	---	12.9	550	---	10.8
650	---	13.4	650	---	11.8	650	---	10.6	650	---	9.3	650	---	9.9	600	---	12.5	600	---	10.6
700	---	13.0	700	---	11.2	700	---	10.2	700	---	9.3	700	---	9.6	650	---	11.8	650	---	10.7
750	---	12.7	750	---	10.8	750	---	9.8	750	---	9.1	750	---	9.2	700	---	11.4	700	---	10.5
800	---	12.2	800	---	10.4	800	---	9.5	800	---	8.7	800	---	9.1	750	---	11.4	750	---	10.3
850	---	11.7	850	---	10.0	850	---	9.1	850	---	8.2	850	---	8.5	800	---	11.2	800	---	10.0
900	---	11.2	900	---	9.6	900	---	8.7	900	---	8.0	900	---	8.1	850	---	10.8	850	---	9.6
950	---	10.8	950	---	9.3	950	---	8.2	950	---	7.8	950	---	7.6	900	---	10.4	900	---	9.4
1000	---	10.2	1000	---	9.0	1000	---	7.8	1000	---	7.4	1000	---	7.1	950	---	9.9	950	---	9.0
1030	---	9.9	1050	---	8.6	1050	---	7.3	1050	---	6.9	1050	---	6.8	1000	---	9.4	1000	---	8.6
			1060	---	8.5										1050	---	9.4	1020	---	8.4
															1060	---	9.4			

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #149 21 May 1968 0534 EST Keystone			Ascn #150 21 May 1968 0623 EST Keystone			Ascn #151 21 May 1968 0715 EST Keystone			Ascn #152 21 May 1968 0823 EST Keystone			Ascn #153 23 May 1968 0544 EST Keystone			Ascn #154 23 May 1968 0800 EST Keystone			Ascn #155 25 May 1968 1041 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	9.8	Sfc	---	10.8	Sfc	---	10.5	Sfc	---	10.8	Sfc	---	11.6	Sfc	---	11.0	Sfc	---	19.4
50	---	9.7	50	---	10.2	50	---	10.2	50	---	10.6	50	---	10.5	50	---	10.3	25	---	19.7
100	---	9.6	100	---	9.8	100	---	9.8	100	---	10.3	100	---	10.8	100	---	10.4	50	---	19.3
150	---	9.2	150	---	9.4	150	---	9.4	150	---	9.8	150	---	12.6	150	---	11.1	100	---	19.1
200	---	8.9	200	---	8.9	200	---	8.9	200	---	9.4	200	---	13.4	200	---	11.6	150	---	18.8
250	---	8.6	250	---	8.4	250	---	8.5	250	---	9.0	250	---	13.3	250	---	11.7	200	---	18.5
300	---	8.2	300	---	8.2	300	---	8.1	300	---	8.7	300	---	13.3	300	---	11.5	250	---	18.1
350	---	7.8	350	---	7.8	350	---	7.7	350	---	8.3	350	---	13.6	350	---	11.3	300	---	17.6
365	---	7.5	360	---	7.6	380	---	7.4	400	---	7.9	400	---	13.5	400	---	11.0	350	---	16.8
									425	---	7.7	450	---	13.1	450	---	10.7	400	---	16.2
												500	---	12.7	500	---	10.3	450	---	15.8
												550	---	12.3	550	---	9.9	500	---	15.3
												600	---	11.7	600	---	9.5	550	---	15.0
												650	---	11.2	650	---	9.1	600	---	14.7
												700	---	10.8	700	---	8.8	650	---	14.2
												750	---	10.3	715	---	8.8	700	---	13.8
												800	---	9.8				750	---	13.1
												850	---	9.3				800	---	12.6
												900	---	8.9				850	---	12.0
												950	---	8.5				900	---	11.5
												1000	---	8.1				930	---	11.3
												1050	---	7.5						
												1100	---	7.1						
												1140	---	6.7						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #156 26 May 1968 0534 EST Keystone			Ascn #157 26 May 1968 0744 EST Keystone			Ascn #158 26 May 1968 0838 EST Keystone			Ascn #159 26 May 1968 1038 EST Keystone			Ascn #160 27 May 1968 0609 EST Keystone			Ascn #161 27 May 1968 0902 EST Keystone			Ascn #162 27 May 1968 1027 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	10.3	12.4	Sfc	12.4	16.2	Sfc	14.0	19.2	Sfc	---	---	Sfc	8.5	10.6	Sfc	7.2	9.4	Sfc	6.9	8.5
40	8.2	10.2	50	11.4	15.8	50	13.2	18.6	10	15.4	21.8	20	8.6	11.0	50	7.2	9.4	50	6.7	8.5
50	8.6	11.2	100	11.1	15.5	100	12.9	18.3	50	14.7	21.3	50	8.4	10.8	100	6.8	9.1	100	6.5	8.7
100	9.2	12.2	150	10.7	15.0	150	12.7	17.9	100	14.3	20.8	100	8.2	10.6	150	6.3	8.5	150	6.3	8.0
150	9.1	12.5	200	10.8	15.1	200	12.5	17.5	150	14.0	20.3	150	7.9	10.2	200	6.0	8.2	200	6.1	7.7
200	9.5	13.4	250	11.0	15.3	250	12.4	17.0	200	13.7	19.9	200	7.7	9.8	250	5.5	7.5	250	5.7	7.2
250	9.7	13.9	300	11.0	15.2	300	12.0	16.6	250	13.6	19.5	250	7.5	9.4	300	5.4	7.2	300	5.2	6.8
300	10.0	14.3	350	10.9	14.9	350	12.1	16.5	300	13.4	19.0	300	7.2	9.0	350	5.1	6.9	350	4.9	6.4
350	10.6	14.8	400	10.8	14.8	400	11.6	15.8	350	13.2	18.6	350	7.0	8.6	400	4.8	6.6	400	4.4	6.0
400	10.5	14.5	450	10.6	14.4	450	11.4	15.3	400	13.0	18.2	400	6.8	8.2	450	4.4	6.0	450	4.1	5.6
450	10.4	14.3	500	10.6	14.1	500	11.0	14.7	450	12.8	17.8	450	6.6	7.8	500	4.3	5.8	500	3.6	5.2
500	10.1	13.9	550	10.5	13.8	550	10.7	14.3	500	12.5	17.2	500	6.3	7.4	550	3.9	5.2	550	3.4	4.9
550	10.0	13.6	600	10.2	13.4	600	10.4	13.8	550	12.5	16.9	550	6.0	6.8	600	3.6	4.8	600	3.2	4.4
600	9.9	13.4	650	10.1	13.1	650	10.2	13.3	600	12.0	16.3	600	5.7	6.4	650	3.4	4.6	650	2.9	4.1
650	9.7	13.3	700	10.0	12.9	700	10.0	13.0	650	11.8	15.8	650	5.5	6.2	700	3.1	4.3	700	2.6	3.8
700	9.6	13.0	750	9.8	12.6	750	9.9	12.6	700	11.4	15.2	700	5.4	6.0	740	3.5	4.8	750	2.2	3.6
750	9.4	12.7	800	9.7	12.5	800	9.7	12.7	750	11.1	14.7	750	5.0	5.4	750	3.0	4.1	800	2.1	3.0
800	8.6	12.6	850	9.6	12.7	850	9.6	13.1	800	10.7	14.1	780	4.9	5.1	775	3.5	4.9	850	1.5	2.7
850	5.0	13.5	900	7.8	13.6	900	9.1	13.2	850	10.6	13.8				800	3.3	4.3	880	1.5	2.5
900	5.5	13.2	950	7.3	13.8	950	9.1	13.4	900	10.3	13.2				850	2.4	3.2	900	2.0	3.6
925	5.8	13.2	1000	7.7	13.8	1000	8.8	13.3	950	10.0	12.6				880	2.3	2.8	950	4.0	5.8
950	4.8	13.6	1030	9.7	13.8	1020	8.7	13.1	1000	9.9	12.3				890	3.9	5.7	1000	4.7	6.2
1000	3.4	13.7							1030	9.6	12.0				900	4.7	6.0	1050	4.5	6.1
1050	3.1	13.8													950	5.0	6.2			
1100	3.1	13.9													985	5.4	6.8			
1150	2.5	13.9													1000	5.4	6.4			
1200	2.3	13.8													1010	5.3	6.5			
1250	2.1	13.4																		
1270	2.1	13.4																		

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #163 28 May 1968 0542 EST Keystone			Ascn #164 28 May 1968 0718 EST Keystone			Ascn #165 28 May 1968 0844 EST Keystone			Ascn #166 29 May 1968 0603 EST Keystone			Ascn #167 30 May 1968 0547 EST Keystone			Ascn #168 31 May 1968 0544 EST Keystone			Ascn #169 31 May 1968 0738 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	8.7	10.1	Sfc	8.8	10.5	Sfc	9.1	10.9	Sfc	---	---	Sfc	---	---	Sfc	11.6	12.8	Sfc	12.9	14.7
50	8.3	10.0	50	8.5	10.3	50	8.7	10.8	50	---	---	50	---	---	50	11.4	12.8	15	12.9	14.7
100	8.2	9.8	100	8.2	10.0	100	8.5	10.5	100	---	---	100	12.8	13.8	100	9.2	10.6	50	12.1	14.0
150	8.0	9.5	150	8.0	9.7	150	8.4	10.2	110	9.2	9.8	110	12.5	13.4	150	11.1	12.3	100	11.7	13.5
200	7.8	9.3	200	7.7	9.3	200	8.1	9.8	150	8.9	9.4	150	12.5	13.6	200	10.8	12.0	150	11.4	13.0
250	7.6	9.0	250	7.5	8.8	250	7.8	9.4	200	8.8	9.8	200	12.2	13.6	250	10.6	11.6	200	11.2	12.6
300	7.3	8.7	300	7.3	8.5	300	7.5	8.8	250	8.7	10.1	250	12.1	13.5	300	10.4	11.4	250	11.0	12.2
350	7.2	8.4	350	7.1	8.2	350	7.3	8.4	300	8.5	10.2	300	11.9	13.3	350	10.1	11.1	300	10.7	11.7
400	7.0	8.1	400	6.8	7.9	400	7.0	7.9	350	8.6	10.5	350	11.5	12.9	400	9.8	11.0	350	10.6	11.4
450	6.7	7.7	450	6.8	7.8	450	6.8	7.5	370	8.8	11.0	400	11.2	12.6	450	9.7	11.2	400	10.3	10.9
500	6.6	7.4	500	6.7	7.7	500	6.5	7.3	400	8.7	10.9	450	11.0	12.1	500	9.5	10.7	420	10.1	10.6
550	6.4	7.2	550	6.4	7.4	550	6.3	6.8	450	8.7	10.8	500	10.7	11.7	550	9.0	10.2			
600	6.1	6.9	600	6.2	7.1	600	6.0	6.4	500	8.7	10.6	550	10.2	11.8	600	8.5	9.8			
650	6.0	6.7	650	6.2	7.0				550	8.5	10.3	600	9.8	11.8	650	8.1	9.5			
700	5.8	6.4	700	6.0	6.8				600	8.5	10.3	650	9.2	11.8	700	7.9	9.3			
750	5.6	6.2	750	6.0	7.0				650	8.3	10.0	700	9.1	11.7	750	7.7	8.9			
800	6.0	7.1	800	5.9	7.2				700	8.2	9.8	750	8.9	11.3	800	7.3	8.5			
850	6.1	7.2	850	5.9	7.1				750	8.0	9.4	800	8.6	11.2	850	7.1	8.2			
900	6.1	7.2	900	5.6	6.7				800	7.7	9.1	850	8.2	10.8	900	6.9	7.9			
950	6.2	7.4	950	5.6	6.6				850	7.5	9.0	900	8.4	10.6	950	6.5	7.5			
1000	6.1	7.4	1000	5.6	6.4				900	7.1	9.0	950	7.8	10.8	1000	6.2	7.4			
1050	6.1	7.4	1010	5.6	6.4				950	7.0	9.0	1000	7.2	10.6	1040	6.0	7.2			
1100	6.1	7.7							1000	6.5	9.0	1050	7.0	10.6						
									1010	6.5	9.0									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #170 1 June 1968 0738 EST Keystone			Ascn #171 1 June 1968 0852 EST Keystone			Ascn #172 29 June 1968 0532 EST Keystone			Ascn #173 29 June 1968 0712 EST Keystone			Ascn #174 29 June 1968 0816 EST Keystone			Ascn #175 29 June 1968 0931 EST Keystone			Ascn #176 30 June 1968 0617 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	13.0	13.6	Sfc	---	---	Sfc	18.0	21.8	Sfc	18.9	23.1	Sfc	20.3	25.1	Sfc	22.8	24.5
50	---	---	50	11.9	12.7	10	17.5	21.3	50	17.4	21.8	50	18.2	22.9	50	19.2	24.6	10	22.4	24.0
100	13.2	14.0	70	11.8	12.6	20	17.5	20.6	100	17.1	21.7	100	17.7	22.6	100	18.8	24.1	50	21.9	24.2
150	12.5	13.3	100	12.1	12.9	50	17.3	21.0	150	16.9	21.5	150	17.5	22.3	150	18.6	23.7	100	21.8	24.6
200	12.2	13.2	150	12.5	13.4	100	17.3	21.5	200	16.6	21.2	200	17.3	21.9	200	18.4	23.2	150	21.8	24.8
210	12.1	13.1	200	12.6	13.8	150	16.9	21.1	225	16.7	20.9	250	17.1	21.5	250	18.1	22.7	200	22.8	25.8
250	12.0	13.8	250	12.4	13.8	200	16.7	20.8	250	16.4	21.3	300	16.8	21.2	300	18.0	22.4	250	21.8	25.8
300	11.6	13.8	300	12.0	14.2	250	16.5	20.6	280	16.5	21.8	350	16.7	20.9	350	17.6	21.9	300	21.6	25.6
350	11.4	13.7	350	11.9	14.4	300	16.4	20.4	300	16.4	21.8	400	16.5	20.8	400	17.5	21.3	350	21.4	25.4
400	11.1	13.7	400	11.5	14.3	350	16.2	20.2	350	15.1	21.5	450	16.4	20.4	450	17.3	21.0	400	21.2	25.2
450	10.8	13.6	450	10.7	14.2	400	16.2	20.4	400	15.9	20.8	500	16.4	20.3	500	17.1	20.6	450	20.8	25.2
500	10.4	13.4	500	10.5	13.9	450	16.2	21.4	450	15.7	20.5	550	16.3	20.0	550	17.0	20.4	500	20.5	25.2
550	10.2	13.2	550	10.2	13.6	500	16.1	21.0	500	15.5	20.5	600	16.5	20.3	600	16.7	20.0	550	19.8	25.4
600	10.4	13.2	600	10.4	13.4	550	16.0	21.0	550	15.7	20.5	650	16.7	20.4	650	16.6	19.6	600	19.7	25.3
650	10.4	13.0	650	10.5	13.2	580	16.0	21.8	590	15.4	20.0	700	16.8	20.3	700	16.4	19.3	650	19.1	25.4
700	10.3	12.8	700	10.7	12.9	600	16.2	22.0	600	15.8	20.4	750	17.1	20.5	750	16.4	19.4	700	18.7	25.2
750	10.1	12.5	750	10.3	12.6	650	16.1	21.7	650	18.0	22.0	800	17.3	20.5	800	16.8	19.7	750	19.2	25.0
800	9.9	12.1	800	8.9	12.7	700	16.0	21.4	700	18.1	21.9	650	17.5	20.5	850	17.1	19.8	770	19.2	25.0
850	9.4	11.6	850	9.0	12.4	750	16.5	21.3	750	18.0	21.6	900	17.6	20.4	900	17.2	19.6	800	17.9	25.4
900	9.1	11.4	900	8.7	12.1	800	16.5	20.9	800	16.2	19.3	950	17.4	20.1	950	17.4	19.5	850	17.2	25.0
950	8.2	11.0	950	8.5	11.6	850	17.0	20.6	850	15.9	19.0	1000	17.3	19.9	1000	17.3	19.2	900	17.1	24.5
1000	7.4	10.8	1000	9.2	11.2	900	17.5	20.2	900	17.7	20.7	1025	17.2	19.7				950	16.8	24.0
1030	7.5	10.7	1050	8.8	10.7	950	17.6	20.0	950	17.4	20.2							980	16.6	23.8
						1000	17.8	19.6	1000	17.4	19.9									
						1030	17.5	19.4	1010	17.3	19.8									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #177 30 June 1968 0804 EST Keystone			Ascn #178 30 June 1968 0900 EST Keystone			Ascn #179 1 July 1968 0609 EST Keystone			Ascn #180 1 July 1968 0750 EST Keystone			Ascn #181 1 July 1968 0854 EST Keystone			Ascn #182 1 July 1968 1032 EST Keystone			Ascn #183 3 July 1968 0537 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	23.6	27.6	Sfc	24.6	29.8	Sfc	22.8	24.7	Sfc	24.0	27.6	Sfc	24.7	30.0	Sfc	25.0	32.2	Sfc	---	19.1
50	23.0	27.1	50	23.3	29.2	30	22.3	24.2	50	23.6	27.2	50	24.5	29.6	50	24.6	31.8	50	---	18.6
100	22.5	26.7	100	22.9	28.7	50	22.5	24.3	100	23.3	26.9	100	24.1	29.1	100	24.4	31.3	100	---	18.2
150	22.3	26.3	150	22.9	28.5	100	22.5	24.6	150	23.1	26.5	150	23.6	28.5	150	24.2	30.8	150	---	18.2
200	22.0	25.9	200	22.6	27.8	150	22.5	24.9	200	22.9	26.1	200	23.8	28.1	200	24.2	30.5	190	---	18.8
250	21.8	25.5	250	22.3	27.3	200	22.5	25.4	250	22.6	26.2	250	23.7	27.8	250	23.7	29.7	200	---	18.8
255	21.4	26.1	300	21.9	26.9	245	22.5	26.0	300	22.6	25.6	300	23.1	27.1	300	23.7	29.4	250	---	18.8
270	21.8	25.2	330	22.0	26.8	250	22.2	25.0	350	22.0	25.0	350	23.1	26.7	350	23.3	28.8	300	---	18.6
300	21.6	25.0	350	22.0	26.6	270	22.7	24.9	370	22.2	26.0	400	23.0	26.3	400	23.2	28.5	350	---	18.4
330	21.4	24.8	400	21.5	26.1	300	22.5	26.3	400	22.1	25.6	450	22.2	25.7	450	23.0	28.0	400	---	18.2
350	20.8	25.6	450	21.2	25.6	350	22.4	25.8	450	21.9	25.5	500	22.2	25.2	500	22.3	27.2	450	---	18.0
375	21.1	24.6	500	20.7	25.3	400	22.4	26.3	480	21.9	25.4	550	21.9	24.8	550	22.1	26.6	500	---	17.8
400	20.9	24.6				450	22.5	26.7	500	21.5	26.2	600	21.5	24.5	600	21.9	26.0	550	---	17.4
450	20.7	24.3				460	22.6	27.0	550	21.2	25.8	650	21.2	24.2	650	21.2	25.8	600	---	17.1
500	20.3	24.1				500	22.7	26.9	600	21.6	25.8	700	20.6	24.6	700	21.2	25.2	650	---	16.8
550	19.9	23.7				550	22.5	26.7	650	21.4	25.4	750	21.0	22.6	750	20.8	24.8	700	---	16.6
600	19.8	25.0				600	22.4	26.3	700	21.4	24.9	800	20.4	22.8	800	21.1	24.2	750	---	16.3
650	19.2	25.1				650	22.1	25.8	750	20.9	24.5	850	19.9	23.1	850	21.1	23.8	800	---	16.0
700	18.9	25.1				700	21.9	25.4	800	20.8	24.1	900	19.8	22.8	900	20.7	23.1	850	---	15.8
750	18.4	24.8				750	21.7	24.9	850	20.7	23.6	950	19.5	22.3	950	20.0	22.8	900	---	15.4
800	17.9	24.6				800	21.3	24.5	900	20.2	23.2	1000	19.2	21.7	1000	19.8	22.2	950	---	15.2
850	18.2	24.2				850	21.1	24.1	950	19.6	22.7	1030	19.2	21.5	1010	19.4	22.2	1000	---	14.9
900	17.9	23.8				900	20.9	23.6	1000	19.2	22.4									
950	17.5	23.4				950	20.7	23.1	1020	18.6	22.1									
1000	17.3	23.1				1000	20.4	22.6												
						1030	20.0	22.2												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #184 3 July 1968 0832 EST Keystone			Ascn #185 3 July 1968 0929 EST Keystone			Ascn #186 4 July 1968 0543 EST Keystone			Ascn #187 4 July 1968 0740 EST Keystone			Ascn #188 4 July 1968 0844 EST Keystone			Ascn #189 5 July 1968 0538 EST Keystone			Ascn #190 5 July 1968 0740 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	17.0	21.2	Sfc	17.5	22.3	Sfc	---	---	Sfc	11.9	12.8	Sfc	14.1	16.5	Sfc	10.1	10.6	Sfc	12.1	14.1
50	16.3	20.5	50	17.1	21.8	50	---	---	50	11.5	12.2	50	13.1	15.6	50	8.9	9.6	50	11.7	13.8
100	16.1	20.1	100	16.8	21.0	100	11.8	12.4	70	11.5	12.1	100	12.8	15.2	80	8.4	9.1	80	11.9	14.0
150	16.1	19.8	150	16.6	20.7	110	10.3	10.8	100	11.5	12.5	150	12.8	15.0	100	8.6	9.3	100	12.2	14.8
200	15.6	19.4	200	16.2	19.9	120	10.7	11.3	150	11.2	12.3	200	12.5	14.6	150	10.9	12.8	150	12.2	15.2
250	15.6	18.9	250	16.1	19.6	150	10.9	11.5	200	11.2	12.2	250	12.2	14.1	200	11.4	15.0	200	11.7	15.7
300	15.6	18.4	300	15.9	19.1	200	10.8	11.7	250	11.2	12.2	300	11.8	13.5	250	12.3	17.2	250	11.8	17.6
350	15.6	18.2	350	15.4	18.4	250	10.8	11.8	300	11.1	12.2	350	11.5	13.0	300	11.8	18.2	300	11.5	18.2
400	15.3	17.7	400	15.3	18.1	300	10.9	11.9	350	11.0	12.2	400	11.2	12.6	350	11.8	18.4	350	11.2	18.2
450	14.8	17.0	450	14.8	17.5	350	11.2	12.2	400	10.5	12.0	450	10.8	12.1	400	11.7	18.4	400	11.0	18.2
500	14.4	16.6	500	14.4	16.9	400	11.0	11.9	450	10.0	11.8	500	10.2	11.9	450	11.3	18.3	450	10.6	18.0
550	14.3	16.1	550	14.1	16.5	450	10.4	11.7	500	9.6	11.4	550	10.0	11.3	500	11.4	18.0	500	11.3	17.6
600	14.1	15.5	600	14.2	16.1	500	9.6	11.6	550	9.2	10.9	600	9.6	11.0	550	11.2	17.6	550	10.7	17.1
650	13.8	15.2	650	14.0	15.7	550	9.0	11.4	600	8.9	10.8	650	9.4	10.6	600	11.0	17.4	600	10.5	16.7
700	12.9	15.0	700	13.8	15.3	600	8.8	11.1	650	8.7	10.5	700	9.0	10.2	650	10.7	16.9	650	10.1	16.3
750	12.6	14.8	750	13.5	14.9	650	8.6	10.8	700	8.3	10.2	750	8.4	9.8	700	10.4	16.4	700	9.7	15.8
800	12.3	14.6	800	13.0	14.6	700	8.4	10.5	750	8.1	9.9	800	8.0	9.4	750	10.2	16.0	750	9.4	15.4
850	12.4	14.6	850	12.6	14.0	750	8.4	10.2	800	7.9	9.7	850	7.6	9.0	800	9.8	15.5	800	9.1	15.1
900	12.2	14.2	900	12.2	14.0	800	8.2	9.9	850	7.6	9.4	900	7.2	9.0	850	9.2	15.2	850	8.7	14.6
950	12.0	13.9	950	11.9	13.9	850	7.8	9.8	900	7.2	9.2	950	6.8	8.8	900	8.4	15.0	900	8.3	14.2
1000	11.6	13.6	1000	11.6	13.7	900	7.6	9.7	950	6.7	9.0	1000	6.2	8.5	950	8.4	14.6	950	8.1	13.9
			1050	11.3	13.5	950	7.2	9.4	1000	6.6	8.8	1050	6.0	8.4	1000	8.2	14.2	1000	8.1	13.6
						1000	7.0	9.1	1040	5.7	8.6				1020	8.0	13.8	1030	8.4	13.4
						1040	6.7	8.9												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #191 5 July 1968 0913 EST Keystone			Ascn #192 5 July 1968 1038 EST Keystone			Ascn #193 6 July 1968 0537 EST Keystone			Ascn #194 6 July 1968 0745 EST Keystone			Ascn #195 6 July 1968 0841 EST Keystone			Ascn #196 6 July 1968 1037 EST Keystone			Ascn #197 8 July 1968 0543 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	15.7	22.0	Sfc	16.0	24.4	Sfc	16.0	16.4	Sfc	16.5	17.6	Sfc	16.9	18.0	Sfc	17.8	21.6	Sfc	13.3	14.2
50	15.0	21.4	50	14.7	23.1	50	15.4	15.8	50	16.1	17.1	50	16.6	17.8	50	16.8	20.8	50	12.5	13.4
100	14.7	20.9	100	14.3	22.6	100	15.6	16.1	100	15.9	16.8	100	16.4	17.5	100	16.6	20.6	100	12.6	13.4
150	14.5	20.6	150	14.2	22.2	150	15.5	16.2	150	15.9	16.6	150	16.2	17.2	150	16.2	20.2	150	14.6	17.4
200	14.0	20.3	200	14.4	22.1	175	15.3	16.2	200	15.4	16.0	200	16.0	16.8	200	15.9	19.8	200	14.9	19.9
250	13.5	19.8	250	14.0	21.6	200	15.1	16.7	250	15.2	16.0	250	15.5	16.4	250	16.1	19.6	250	14.8	22.4
300	13.4	19.4	300	13.6	21.1	250	14.9	17.5	300	14.6	16.2	300	15.1	16.1	300	15.8	18.9	300	15.3	22.9
350	13.3	18.9	350	13.4	20.5	300	14.8	17.8	350	14.5	16.8	350	14.5	16.1	350	15.7	18.4	350	15.2	22.8
400	12.8	18.6	400	13.1	20.1	350	14.7	17.9	400	14.2	16.4	400	13.8	16.2	400	15.4	17.9	400	15.2	22.7
450	12.1	18.4	450	13.1	19.6	400	14.6	18.1	450	14.0	16.2	450	13.3	16.0	450	14.8	17.4	450	15.3	22.4
500	12.1	18.0	500	13.0	19.2	450	14.5	19.0	500	13.8	15.8	500	13.2	15.7	500	14.9	16.9	500	15.2	22.0
550	12.0	17.4	550	12.6	18.7	500	14.4	18.8	550	13.6	15.4	550	13.6	15.4	550	14.4	16.4	550	15.1	21.5
600	12.0	16.9	600	12.3	18.1	550	14.4	18.6	600	13.4	15.3	600	13.4	15.1	600	14.0	16.0	600	15.3	21.1
650	11.7	16.5	650	11.9	17.4	600	14.1	18.2	650	13.0	15.2	650	13.2	14.7	650	14.2	15.6	650	15.0	20.6
700	11.6	16.1	700	11.6	16.8	650	13.9	17.8	700	12.9	15.2	700	13.0	14.5	700	14.0	15.0	700	14.8	20.2
750	10.7	15.7	750	11.3	16.3	700	13.6	17.2	740	12.8	15.0	750	12.5	14.5	750	13.1	14.5	750	14.4	19.8
800	9.8	15.2	800	10.8	15.8	750	13.5	16.9				800	12.2	14.2	780	12.4	14.3	800	14.2	19.3
850	9.7	15.1	850	10.6	15.4	800	13.2	16.4				850	12.0	14.2				850	13.8	18.8
900	9.0	14.6	900	10.4	15.0	850	12.8	15.8				900	12.0	14.0				900	13.5	18.3
950	9.2	14.2	950	10.3	14.7	900	12.7	15.4				950	11.9	13.7				950	13.4	17.9
1000	9.6	13.8	1000	9.9	14.1	950	12.6	15.1				1000	11.8	13.4				1000	11.7	17.8
1050	9.4	13.3	1050	9.7	13.6	1000	12.3	14.6				1050	11.5	13.0				1050	10.4	17.7
1060	9.3	13.2				1030	12.1	14.3												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #198 8 July 1968 0730 EST Keystone			Ascn #199 8 July 1968 0840 EST Keystone			Ascn #200 8 July 1968 0941 EST Keystone			Ascn #201 8 July 1968 1029 EST Keystone			Ascn #202 9 July 1968 0548 EST Keystone			Ascn #203 9 July 1968 0738 EST Keystone			Ascn #204 9 July 1968 0909 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	13.9	15.0	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	18.7	19.9	Sfc	18.9	21.9	Sfc	19.7	24.9
50	13.8	14.9	20	16.6	20.6	20	18.7	26.0	10	18.0	27.0	5	18.2	19.4	50	18.8	21.8	50	19.4	24.5
80	13.9	15.0	50	16.4	20.4	50	18.6	26.0	50	17.2	26.4	10	18.4	19.5	100	18.7	21.6	100	18.9	23.9
100	14.5	15.7	100	16.3	20.6	100	17.8	25.1	100	17.1	25.8	50	18.6	20.4	150	18.2	21.2	150	18.8	23.6
150	14.2	18.2	150	16.0	20.6	150	17.6	24.8	150	17.2	25.6	100	18.7	21.2	200	18.1	20.7	200	18.8	23.3
200	14.6	20.6	180	15.2	21.8	200	17.3	24.2	200	17.1	25.0	150	18.7	21.3	250	17.7	20.5	250	18.5	22.8
250	13.9	21.8	200	15.0	21.6	250	17.3	23.8	250	16.8	24.7	200	18.5	21.4	300	17.3	20.3	300	18.2	22.3
300	14.2	22.1	250	14.7	22.3	300	16.8	23.4	300	16.7	24.2	250	18.5	21.5	350	17.0	20.0	350	17.9	21.7
350	14.2	21.9	300	14.9	22.5	350	15.1	23.1	350	16.1	23.6	300	18.3	21.5	400	16.7	19.8	400	17.6	21.2
400	14.4	21.7	350	14.9	22.2	400	16.2	22.5	400	15.9	23.3	350	18.3	21.4	450	16.1	20.2	450	17.3	20.6
450	14.8	21.4	400	15.0	21.8	430	16.2	22.2	450	15.6	22.6	400	18.0	21.0	500	15.5	20.1	500	17.1	20.2
500	14.8	21.0	450	15.0	21.8				500	15.3	22.0	450	17.5	20.8	550	15.4	20.0	550	17.0	19.7
550	14.5	20.8	500	14.6	21.2				550	15.4	21.6	500	17.4	20.8	600	15.9	19.7	600	17.0	19.6
600	14.2	20.3	550	14.3	20.9				600	14.8	21.1	550	17.0	20.8	650	15.8	19.4	650	16.9	19.4
650	14.0	19.8	600	14.0	20.4				650	14.8	20.6	600	16.8	20.6	700	15.4	19.1	700	16.1	19.5
700	13.7	19.4	650	13.8	20.0				700	14.0	20.4	650	16.6	20.4	750	15.5	19.1	750	16.4	19.2
750	13.3	18.9	700	13.6	19.5				750	14.4	19.8	700	16.4	20.2	800	15.9	19.1	800	16.1	19.0
800	13.2	18.4	750	12.6	19.2				800	13.6	19.2	750	16.0	20.2	850	15.6	19.5	850	15.9	18.6
850	13.0	18.0	800	11.3	18.9				850	13.9	18.5	800	16.2	20.6	900	15.7	19.2	900	15.5	18.4
900	12.6	17.5	850	11.4	18.6				900	13.2	18.1	850	16.7	20.3	950	15.7	19.0	950	15.4	18.8
950	12.3	17.3	900	11.5	18.1				950	13.2	17.6	900	16.7	19.9	1000	15.8	18.6	1000	14.9	18.7
1000	11.0	17.1	950	11.1	17.7				1000	12.9	17.0	950	16.6	19.6	1030	15.7	18.4	1050	14.9	18.3
1050	10.6	16.8	1000	11.3	17.2				1040	12.8	16.8	1000	16.3	19.2						
			1050	11.1	16.9							1040	16.1	18.8						
			1060	11.0	16.8															

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #205 9 July 1968 1001 EST Keystone			Ascn #206 10 July 1968 0546 EST Keystone			Ascn #207 10 July 1968 0716 EST Keystone			Ascn #208 10 July 1968 0843 EST Keystone			Ascn #209 14 July 1968 0600 EST Keystone			Ascn #210 14 July 1968 0738 EST Keystone			Ascn #211 14 July 1968 0836 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	20.1	25.8	Sfc	16.4	17.4	Sfc	16.7	18.5	Sfc	19.3	23.1	Sfc	18.6	19.4	Sfc	20.0	21.8	Sfc	21.3	24.5
50	19.5	25.0	50	15.8	16.7	50	16.6	18.2	50	19.0	22.8	35	18.1	18.9	50	19.8	21.7	50	21.0	24.2
100	19.4	24.9	80	16.6	17.6	100	17.0	19.1	100	18.8	22.4	50	18.1	19.0	100	20.1	22.0	100	20.8	23.8
150	19.0	24.2	100	17.6	19.6	150	17.0	19.6	150	18.7	22.3	100	18.7	19.7	150	19.9	21.8	150	20.7	23.4
200	18.8	23.8	150	17.4	19.9	200	17.0	20.6	200	18.6	22.0	150	19.3	20.7	200	19.6	21.4	200	20.5	23.0
250	18.6	23.4	200	17.5	20.6	250	17.3	21.1	250	18.3	21.6	200	20.4	22.6	250	19.7	21.3	250	20.3	22.6
300	18.5	23.2	250	18.0	21.7	300	18.0	21.6	300	18.2	21.2	250	20.2	22.9	300	19.6	21.6	300	20.0	22.1
350	18.3	22.8	300	18.9	22.4	350	18.5	21.7	350	18.1	20.8	300	19.9	22.9	350	19.5	21.6	350	19.8	21.8
400	18.1	22.3	350	19.0	22.4	400	18.2	22.0	400	17.7	20.5	350	19.9	23.3	400	19.4	21.6	400	19.1	21.8
450	17.5	21.7	400	18.8	22.8	450	18.1	21.9	450	17.8	20.6	400	20.0	23.4	450	19.2	21.6	450	19.2	21.4
500	17.5	21.5	450	18.6	22.6	500	18.1	21.7	500	17.6	20.6	450	19.8	23.0	500	18.9	21.3	500	18.5	21.4
550	16.9	20.9	500	18.5	22.5	550	18.0	21.4	550	17.6	20.7	500	19.4	22.4	550	18.6	21.1	550	18.4	21.2
600	16.8	20.2	550	18.6	22.2	565	17.8	21.2	600	17.3	20.4	550	19.2	22.1	600	18.2	21.2	565	18.4	21.2
650	16.4	19.8	600	18.5	21.7				650	17.2	20.2	600	18.9	21.9	650	18.0	21.4			
700	16.2	19.4	650	18.3	21.5				700	17.2	19.9	650	19.0	21.9	700	18.6	21.4			
730	15.8	19.0	700	17.9	21.2				750	17.0	19.6	700	17.9	22.2	750	18.1	21.1			
			750	17.6	20.8				800	16.7	19.4	750	18.3	22.0	800	17.8	20.8			
			800	16.9	20.4				850	16.5	19.2	800	18.0	21.7	850	17.1	20.9			
			850	16.6	20.0				900	16.2	18.8	850	17.1	21.7	900	16.4	21.0			
			900	16.3	19.6				950	15.9	18.5	900	16.9	21.5	950	16.5	20.8			
			950	16.2	19.2				1000	15.7	18.1	950	15.9	21.3	1000	16.4	20.4			
			1000	16.2	18.6				1050	15.5	17.6	1000	15.8	21.0	1050	16.2	20.0			
			1050	16.5	18.1							1040	15.7	20.7						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #212 14 July 1968 0934 EST Keystone			Ascn #213 17 July 1968 0625 EST Keystone			Ascn #214 17 July 1968 0753 EST Keystone			Ascn #215 17 July 1968 0951 EST Keystone			Ascn #216 19 July 1968 0542 EST Keystone			Ascn #217 19 July 1968 0710 EST Keystone			Ascn #218 19 July 1968 0759 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	22.4	26.4	Sfc	20.6	21.3	Sfc	22.0	23.4	Sfc	22.2	24.0	Sfc	21.2	22.4	Sfc	21.7	24.1	Sfc	21.3	23.6
50	21.8	25.6	50	20.5	21.1	50	20.9	21.9	50	21.9	23.5	20	21.2	22.4	50	21.4	23.8	50	21.3	23.6
100	21.4	24.8	100	20.4	21.0	100	20.5	21.4	100	21.6	23.2	50	21.4	23.0	100	21.1	23.4	100	21.1	23.2
150	21.4	24.5	150	20.2	20.9	150	20.4	21.2	150	21.3	22.9	100	21.2	23.0	150	21.0	23.0	150	20.9	22.8
200	21.1	24.0	200	20.2	20.8	200	20.2	21.3	200	21.2	22.7	150	21.1	23.1	200	20.8	22.6	200	20.6	22.2
250	20.7	23.4	250	20.4	21.8	250	20.0	21.4	250	20.8	22.2	200	21.2	23.4	250	20.5	22.1	250	20.4	21.7
300	20.4	23.0	300	19.9	22.6	300	19.9	21.4	300	20.9	21.9	250	20.9	23.2	300	20.2	21.6	300	20.1	21.2
350	20.4	22.5	350	19.5	22.3	350	20.5	21.7	350	20.3	21.2	300	20.6	23.0	350	20.0	21.3	350	20.0	20.9
400	19.9	22.1	400	19.2	22.2	400	19.3	21.9	400	20.0	20.9	350	20.3	23.0	400	19.7	20.6	400	19.6	20.2
450	20.3	22.0	450	19.2	21.9	450	19.1	21.6	450	19.7	20.6	400	20.2	22.4	450	19.5	20.2	435	19.3	19.9
500	18.8	21.9	500	20.5	21.7	500	19.0	21.4	500	19.5	20.8	450	19.8	22.1	490	19.2	19.8			
550	18.6	21.4	550	20.4	21.2	550	18.2	21.4	550	18.7	20.4	500	19.6	21.7						
600	18.6	21.2	600	20.2	20.9	600	19.6	21.4	600	18.4	20.8	550	19.2	21.4						
650	17.6	21.3	650	19.9	20.8	650	19.6	21.0	650	18.1	20.5	600	19.1	21.0						
700	17.6	21.0	700	19.1	21.1	700	19.2	20.6	700	19.2	20.4	650	18.8	20.6						
750	17.9	20.8	750	18.5	20.9	750	19.3	20.3	740	19.1	20.1	700	18.5	20.5						
800	18.7	20.5	800	17.7	20.9	800	18.8	19.9				710	18.4	21.4						
850	18.3	20.1	850	17.8	20.6	850	18.3	19.8				750	17.9	21.4						
900	18.0	19.8	900	18.1	20.1	900	18.0	19.4				800	17.5	20.9						
950	17.6	19.8	950	17.9	19.5	950	16.3	19.3				850	17.3	20.8						
1000	17.2	19.5	1000	16.9	19.3	1000	16.6	19.0				900	17.0	20.8						
			1030	15.8	19.4	1030	15.4	19.0				950	17.1	20.6						
												1000	16.9	20.4						
												1020	16.7	20.4						

Ascn #219 19 July 1968 0831 EST Keystone		
Z(m)	WB(°C)	T(°C)
Sfc	21.3	23.5
50	21.3	23.4
100	21.1	23.1
150	20.8	22.6
200	20.6	22.0
250	20.3	21.7
300	20.2	21.4
350	20.0	20.9
400	19.7	20.3
440	19.4	20.0

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #220 21 July 1968 0543 EST Keystone			Ascn #221 21 July 1968 0736 EST Keystone			Ascn #222 21 July 1968 0820 EST Keystone			Ascn #223 21 July 1968 1016 EST Keystone			Ascn #224 22 July 1968 0543 EST Keystone			Ascn #225 22 July 1968 0701 EST Keystone			Ascn #226 22 July 1968 0849 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	16.9	24.9	Sfc	15.7	17.0	Sfc	15.3	16.8	Sfc	19.7	24.+
10	12.4	12.9	10	14.5	16.0	10	15.6	18.4	50	16.6	24.4	10	15.1	16.4	50	14.8	16.3	50	19.5	24.2
50	12.2	12.7	50	14.0	15.5	50	15.5	18.2	100	16.3	23.8	50	14.7	15.9	60	14.7	16.2	100	19.1	23.8
100	12.6	13.3	100	13.8	15.4	100	15.1	17.7	150	16.4	23.2	60	14.8	15.8	100	15.1	18.0	150	19.0	23.4
150	13.9	14.9	150	14.1	15.8	150	15.5	18.0	200	15.5	22.9	100	15.4	17.8	150	15.4	19.4	200	18.9	23.2
200	14.8	17.7	180	14.1	15.8	200	14.9	18.1	250	15.7	22.7	150	16.4	20.2	200	14.8	20.2	250	19.0	23.2
250	15.7	19.4	200	14.5	16.9	250	14.5	19.7	300	15.4	22.2	200	16.9	23.1	250	16.7	22.1	300	19.1	23.0
300	15.0	20.0	250	14.1	19.9	300	14.4	20.2	350	15 0	21.4	250	17.6	24.3	300	17.5	22.8	350	18.8	22.6
350	14.0	20.5	300	14.3	20.1	350	14.2	20.1	400	14.3	20.9	300	18.0	24.6	350	17.9	23.1	400	19.2	22.8
400	14.8	20.7	350	14.3	19.9	400	14.2	20.1	450	14.5	20.6	350	17.8	24.9	400	18.0	23.0	450	19.2	22.6
450	14.7	20.3	400	14.2	19.8	450	14.0	19.8	500	14.2	20.0	400	18.4	24.7	450	18.3	22.5	500	19.7	23.2
500	14.5	19.9	450	14.1	19.9	500	13.7	19.3	550	14.0	19.5	450	18.4	24.2	500	18.1	22.1	550	19.4	23.2
550	14.3	19.6	500	13.9	19.3	550	13.4	18.8	600	13.5	19.3	500	18.4	23.8	550	18.8	21.9	600	18.7	23.1
600	14.1	19.1	550	13.6	18.8	590	13.2	18.2	650	13.6	18.8	550	18.2	23.4	600	19.0	21.6	650	17.9	22.6
650	14.0	18.6	600	13.3	18.3				700	12.0	18.4	600	18.3	23.0	650	19.0	21.4	700	18.0	22.4
700	13.9	18.2	650	13.0	17.8				750	13.1	17.8	650	18.4	22.6	700	18.4	21.0	750	17.1	21.9
750	13.8	17.8	700	12.8	17.4				775	13.5	18.0	700	18.3	22.2	740	18.2	20.8	800	16.7	21.6
800	13.3	17.3	750	12.6	17.0							750	18.0	21.8				850	16.5	21.3
850	13.1	16.8	800	12.4	16.5							800	18.6	21.4				900	16.3	20.8
900	12.8	16.5	850	12.0	16.0							850	18.2	20.8				950	16.2	20.3
950	12.5	16.1	900	11.5	15.6							900	18.0	20.4				1000	16.3	19.9
1000	11.8	15.6	950	11.3	15.1							950	17.7	19.8				1040	16.1	19.5
1050	11.8	15.2	1000	11.0	14.6							1000	17.6	19.4						
			1050	11.0	14.4							1050	16.9	19.1						

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #227 22 July 1968 1007 EST Keystone			Ascn #228 16 October 1968 0729 EST Keystone			Ascn #229 16 October 1968 0905 EST Keystone			Ascn #230 16 October 1968 1007 EST Keystone			Ascn #231 16 October 1968 1039 EST Keystone			Ascn #232 16 October 1968 1107 EST Keystone			Ascn #233 17 October 1968 0811 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	21.9	27.2	Sfc	---	---	Sfc	16.6	18.4	Sfc	18.2	21.8	Sfc	20.2	24.2	Sfc	---	---	Sfc	---	---
50	21.6	26.7	20	9.6	10.2	30	14.0	15.4	50	17.0	20.9	50	17.8	23.0	10	17.9	23.4	17	17.5	18.5
100	21.3	26.3	50	9.4	9.9	50	14.1	15.6	100	17.0	20.7	100	17.1	22.1	50	17.4	22.9	27	17.5	18.4
150	21.0	25.9	100	12.4	13.4	70	13.8	15.2	150	16.8	20.8	150	16.9	21.7	100	17.0	22.3	50	17.4	18.6
200	20.9	25.7	150	13.2	14.9	100	14.4	16.4	200	16.5	20.6	200	16.8	21.2	150	17.1	22.2	100	17.6	19.5
250	20.6	25.1	200	13.8	16.4	150	14.4	16.8	250	16.3	20.1	250	16.5	20.8	200	16.8	21.8	150	17.5	19.6
300	20.3	24.7	250	14.1	17.3	200	14.6	17.2	300	16.0	19.4	300	16.1	20.1	250	16.5	21.1	200	17.3	19.7
350	20.2	24.5	300	14.0	17.3	250	14.6	17.3	350	16.0	19.0	350	15.5	19.8	300	16.2	20.6	250	17.1	19.7
400	20.3	23.8	350	13.9	17.3	300	14.4	17.4	400	15.7	18.7	400	15.9	19.4	350	15.9	20.2	300	16.8	19.5
450	20.5	23.5	400	13.8	17.1	350	14.2	17.4	450	15.3	18.2	450	15.4	19.0	400	15.8	19.7	350	16.7	19.4
500	---	23.3	450	14.0	17.8	400	14.0	17.3	500	15.1	17.7	500	14.6	19.1	450	15.7	19.3	400	16.4	19.0
550	---	23.0	500	13.6	18.0	450	13.9	17.1	550	15.0	17.2	550	14.2	19.0	500	15.1	18.4	450	16.2	19.0
600	---	22.9	550	13.4	18.2	500	13.7	17.4	600	14.5	16.8	600	14.0	18.2	550	15.1	18.2	500	16.0	18.8
650	---	22.6	600	13.0	17.9	550	13.7	17.8	650	14.0	16.3	650	13.8	17.7	600	14.7	17.6	550	15.7	18.5
700	---	22.0	650	12.8	17.6	600	13.4	17.5	700	13.6	16.0	700	13.4	17.4	650	14.5	17.1	600	15.5	18.2
750	---	21.8	700	12.6	17.3	650	13.2	17.5	705	13.6	16.8	750	13.0	17.2	700	14.2	16.6	650	15.4	18.2
800	---	21.6	750	12.4	17.0	700	12.9	17.3	720	13.2	16.8	800	12.8	16.7	750	14.1	16.2	700	15.3	17.9
850	---	21.2	800	12.3	16.7	750	12.8	17.0	730	13.8	15.8	850	12.4	16.2	780	13.8	15.9	750	15.2	17.4
900	---	20.7	850	12.1	16.3	800	12.3	16.4	740	13.3	16.5	900	12.3	15.8	800	12.9	16.3	800	14.9	17.5
950	---	20.3	900	12.0	15.9	850	12.1	16.0	750	13.7	15.7	950	12.0	15.4	830	12.6	16.0	850	14.6	17.3
1000	---	19.9	950	12.1	15.8	900	11.8	15.6	770	13.1	16.5	1000	11.7	14.9	850	13.5	15.0	900	14.4	17.0
1040	---	19.5	1000	11.9	15.4	950	11.7	15.2	800	12.8	16.2	1030	11.5	14.6	880	12.3	15.9	950	14.2	16.6
			1040	11.4	14.9	1000	11.5	14.9	850	12.6	16.0				900	12.2	15.6	1000	14.9	17.1
						1010	11.3	14.6	900	12.3	15.8				950	12.1	15.1	1050	13.7	15.7
									950	12.0	15.4				1000	11.7	15.0			
									1000	11.8	15.0				1030	11.6	14.8			
									1035	11.6	14.6									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #234 17 October 1968 0940 EST Keystone			Ascn #235 17 October 1968 1017 EST Keystone			Ascn #236 17 October 1968 1132 EST Keystone			Ascn #237 18 October 1968 0624 EST Keystone			Ascn #238 18 October 1968 0759 EST Keystone			Ascn #239 18 October 1968 0917 EST Keystone			Ascn #240 18 October 1968 1023 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	---	---	Sfc	16.4	18.4	Sfc	---	---	Sfc	19.0	22.2
22	18.5	22.6	22	18.4	23.2	32	18.6	24.3	10	15.7	16.6	10	16.5	18.0	12	17.6	20.5	50	18.3	21.9
50	18.4	22.5	50	18.3	23.1	50	18.6	24.3	50	16.2	17.4	50	16.6	18.7	22	18.1	20.3	100	18.0	21.6
100	17.9	21.8	100	17.9	22.7	100	18.2	23.8	100	15.8	17.0	100	16.9	19.6	50	17.6	20.8	150	17.8	21.2
150	17.6	21.4	150	17.7	22.4	150	17.8	23.4	150	17.2	20.0	150	16.8	19.5	100	17.4	20.8	200	17.5	20.7
200	17.5	21.0	200	17.2	21.8	200	17.4	22.8	200	17.2	20.0	200	16.5	19.4	150	17.4	20.6	250	17.2	20.2
250	17.3	20.6	250	17.2	21.3	250	17.4	22.4	250	17.1	20.1	250	16.4	19.2	200	17.0	20.2	300	17.0	19.7
300	16.8	20.0	300	16.8	20.7	262	17.6	22.6	300	17.0	19.9	300	16.2	19.0	250	16.6	20.0	350	16.9	19.3
350	16.6	19.4	350	16.6	20.2	300	17.3	22.1	350	16.7	19.7	350	16.0	18.7	300	16.6	19.5	400	16.7	18.9
400	16.4	19.1	400	16.5	19.9	350	16.8	21.4	400	16.6	19.3	400	15.8	18.4	350	16.4	19.0	450	16.4	18.4
450	16.1	18.7	450	16.1	19.4	400	16.6	20.8	450	16.2	19.0	450	15.6	18.0	400	16.2	18.8	500	16.1	17.9
500	15.8	18.2	500	15.8	18.8	450	16.6	20.6	500	16.1	18.7	500	15.2	17.6	450	15.9	18.3	550	16.0	17.4
550	15.4	17.9	550	15.6	18.2	500	16.0	19.8	550	15.5	18.5	550	15.0	17.6	500	15.7	17.8	600	15.6	17.2
600	15.2	17.6	600	15.4	17.8	550	15.8	19.4	600	15.1	18.0	600	14.7	17.7	550	15.6	17.5	650	15.3	16.5
650	15.1	17.0	650	15.3	17.3	600	15.6	19.0	650	14.6	18.0	650	14.3	17.6	600	15.4	17.0	700	15.0	16.3
700	14.5	18.0	700	14.7	17.3	650	15.4	18.5	680	14.5	17.8	700	14.0	17.5	650	15.1	16.6	750	14.7	15.8
750	14.2	17.8	750	14.6	16.6	700	15.2	18.0	700	14.1	18.2	750	13.6	17.4	700	14.9	16.5	800	14.5	15.5
800	13.9	17.4	760	14.4	16.6	750	14.8	17.4	750	13.4	18.0	800	13.6	17.4	750	14.6	16.0	850	14.1	15.0
850	13.8	17.2	775	14.8	16.2	800	14.5	17.1	800	13.2	18.2	850	13.3	17.4	800	14.5	15.9	900	13.9	14.9
900	14.6	17.7	800	13.9	16.5	812	14.6	17.4	850	13.0	18.4	900	13.0	17.0	850	14.1	15.6	950	13.7	14.8
950	14.5	17.4	850	13.7	16.7	850	14.0	16.7	900	13.3	18.3	950	12.8	16.6	900	14.0	15.6	1000	13.5	14.7
1000	13.3	16.0	900	13.3	16.2	890	14.0	16.1	950	13.1	18.4	1000	12.8	16.2	950	13.7	15.5	1050	13.2	14.6
1050	13.1	15.8	950	13.4	16.0	900	14.0	16.1	1000	12.8	18.2	1050	12.7	15.9	1000	13.6	15.4	1060	13.2	14.6
1060	13.1	15.7	1000	14.3	16.9	930	13.7	16.0	1050	12.5	17.9	1085	12.5	15.5	1050	13.1	15.6			
			1050	13.1	15.5	950	13.4	16.7	1060	12.4	17.8									
			1060	13.0	15.3	1000	13.1	16.3												
						1050	12.9	16.0												
						1070	13.8	16.8												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #241 20 October 1968 0623 EST Keystone			Ascn #242 20 October 1968 0733 EST Keystone			Ascn #243 20 October 1968 0914 EST Keystone			Ascn #244 20 October 1968 1011 EST Keystone			Ascn #245 20 October 1968 1134 EST Keystone			Ascn #246 21 October 1968 0626 EST Keystone			Ascn #247 21 October 1968 0757 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	2.2	2.5	Sfc	7.0	8.4	Sfc	9.4	12.8	Sfc	10.2	15.2	Sfc	6.4	7.3	Sfc	6.2	7.4
9	2.8	3.2	50	2.0	2.4	50	6.8	8.2	50	8.5	12.5	50	9.7	14.8	50	6.4	7.6	50	6.2	7.4
50	2.6	3.0	64	2.3	2.6	70	6.8	8.2	100	8.2	12.1	100	9.4	14.4	100	6.4	7.7	100	6.0	7.3
64	2.8	3.2	100	3.9	4.8	100	7.0	9.2	150	8.0	11.8	150	9.1	13.9	150	6.4	7.6	150	6.2	7.4
100	4.7	5.4	150	5.0	6.6	150	6.8	9.4	200	7.7	11.2	200	9.0	13.6	200	6.2	7.6	200	5.4	6.6
150	5.8	7.2	200	5.3	8.6	200	6.3	9.3	250	7.0	10.6	250	8.8	13.3	250	6.2	7.6	210	5.7	7.0
200	6.2	9.7	250	5.5	9.7	250	6.1	9.1	300	7.0	10.0	300	8.3	12.6	280	6.5	8.1	220	5.6	6.8
250	6.5	10.8	300	5.7	9.9	300	5.8	8.8	350	6.8	10.0	350	8.3	12.2	300	6.4	8.1	250	6.2	7.8
300	6.5	11.1	324	5.7	9.9	350	5.6	8.8	400	6.5	9.7	400	8.1	11.7	350	5.9	8.2	300	6.0	7.7
350	6.5	11.1	350	5.9	10.5	400	5.2	8.8	410	6.4	9.4	450	7.9	11.3	370	5.4	8.2	350	5.8	7.6
400	6.6	11.6	400	6.0	10.8	450	5.8	10.0	420	6.2	10.5	500	7.2	10.8	400	5.8	7.8	400	5.8	7.4
450	6.8	11.8	450	6.1	11.2	500	5.8	10.6	450	6.3	10.7	550	6.6	10.4	450	5.6	7.5	450	5.7	7.0
500	6.8	12.0	500	6.1	11.2	550	5.9	11.0	500	6.0	10.4	600	6.0	10.0	500	4.9	7.2	500	5.1	6.7
550	6.6	11.8	550	6.1	11.2	560	6.0	11.2	550	5.8	10.4	650	6.0	9.4	550	4.6	6.9	550	4.4	6.6
600	6.6	11.6	600	5.9	10.9	600	5.9	11.0	600	5.6	10.2	700	5.5	9.1	600	4.6	6.1	600	4.5	6.1
650	6.2	11.1	650	5.7	10.6	650	5.6	10.6	650	5.3	9.9	750	3.8	9.0	650	3.8	5.8	650	4.4	5.6
700	5.9	10.6	700	5.4	10.2	700	5.4	10.2	700	5.2	9.6	800	4.5	8.7	700	3.7	5.6	690	3.4	5.6
750	5.7	10.2	750	5.2	9.9	750	5.0	9.6	750	4.9	9.1	850	4.2	7.8	750	3.4	5.2	700	3.2	5.5
800	5.4	9.9	800	4.9	9.4	800	4.8	9.3	800	4.5	8.7	900	3.0	7.6	800	3.0	4.9	750	2.9	5.1
850	5.2	9.6	850	4.8	9.1	850	4.6	9.0	850	4.1	8.2	950	3.1	7.3	850	2.6	4.6	800	2.7	4.7
900	5.1	9.3	900	4.5	8.7	900	4.4	8.6	900	3.9	7.9	1000	3.3	7.0	900	2.4	4.2	850	2.4	4.2
950	4.8	9.0	950	4.2	8.4	950	4.0	8.2	950	3.7	7.5	1045	2.9	6.3	950	2.2	3.8	900	2.0	3.8
1000	4.4	8.6	1000	3.9	8.1	1000	3.9	7.8	1000	3.4	7.2				1000	1.8	3.4	950	1.7	3.3
1035	4.2	8.4	1040	3.8	7.7	1035	3.8	7.6	1030	3.2	7.0				1030	1.6	3.0	1000	1.6	3.0
																		1050	1.0	2.4
																		1060	1.0	2.2

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #248 21 October 1968 0949 EST Keystone			Ascn #249 21 October 1968 1111 EST Keystone			Ascn #250 22 October 1968 0631 EST Keystone			Ascn #251 22 October 1968 0804 EST Keystone			Ascn #252 22 October 1968 1000 EST Keystone			Ascn #253 22 October 1968 1031 EST Keystone			Ascn #254 22 October 1968 1141 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	8.0	10.4	Sfc	7.7	11.1	Sfc	---	---	Sfc	2.4	2.8	Sfc	12.0	15.6	Sfc	9.4	15.4	Sfc	10.6	17.7
50	7.6	10.1	50	7.5	11.0	20	2.5	2.8	50	2.2	2.6	5	10.0	13.4	50	8.9	15.3	50	10.2	17.6
100	7.2	9.6	100	7.4	10.6	50	2.8	3.4	100	2.6	3.0	10	11.3	14.7	100	8.2	15.1	100	9.9	17.1
150	7.2	9.4	150	7.2	10.4	100	3.2	3.8	150	4.6	6.0	50	8.8	11.6	150	7.9	14.6	150	9.7	16.7
200	7.0	9.0	200	6.6	9.6	115	3.3	3.8	200	5.8	10.6	100	8.4	11.5	200	7.9	14.1	200	9.3	16.0
250	6.7	8.6	250	6.5	9.3	150	5.4	6.8	250	6.0	11.6	150	8.2	12.8	250	7.6	13.8	250	9.2	15.6
300	6.5	8.2	300	6.4	9.0	200	6.4	9.8	300	6.6	12.1	200	7.7	12.9	300	7.2	13.4	300	8.8	15.3
350	5.1	7.7	350	5.9	8.3	250	6.9	11.1	350	6.1	12.2	250	7.0	12.7	350	7.2	13.8	350	8.6	14.8
400	4.7	7.3	400	5.6	8.1	300	6.9	11.8	400	6.0	12.3	300	6.7	12.8	400	7.2	14.0	400	8.2	14.4
450	5.3	7.1	450	5.2	7.4	350	7.2	12.3	450	5.8	12.2	350	6.2	12.8	450	6.8	12.8	450	7.8	13.8
460	5.4	6.7	500	4.9	7.0	400	6.7	12.3	500	5.6	12.1	400	6.5	13.3	455	7.0	13.4	500	7.6	13.5
465	5.3	7.0	550	4.6	6.5	450	6.1	12.3	550	5.2	11.8	450	6.4	13.0	500	6.7	13.0	550	7.4	13.2
500	5.1	6.3	600	4.2	6.2	500	6.0	12.2	600	4.3	11.8	500	6.2	12.6	550	6.8	12.8	600	7.0	13.0
550	5.0	5.8	650	4.4	5.8	520	6.1	12.2	650	3.0	12.2	550	6.1	12.4	600	6.3	12.6	650	6.6	13.2
555	5.0	6.2	700	3.8	5.4	550	5.5	12.2	700	3.0	12.4	600	6.1	12.3	650	6.3	12.1	700	6.2	13.0
600	4.4	6.1	750	3.5	4.9	560	5.2	12.2	750	2.8	12.5	650	6.1	12.1	700	5.6	11.9	750	6.7	12.7
650	4.1	5.8	800	3.1	4.5	570	5.8	12.2	800	2.2	12.4	700	6.4	11.8	750	5.2	11.5	800	6.9	12.3
700	3.7	5.5	850	2.7	4.0	580	5.7	12.3	850	2.0	12.5				800	4.6	11.6	850	6.7	12.0
750	3.2	5.1	900	2.5	3.6	600	3.8	12.9	900	2.0	12.6				850	4.0	11.4	900	6.7	11.6
800	2.9	4.7	950	2.2	3.2	650	3.0	13.5	950	2.1	12.7				900	2.0	12.7	950	5.9	11.3
850	2.7	4.1	1000	1.8	2.6	700	2.9	13.6	1000	2.2	12.6				950	1.9	12.6	1000	5.6	10.8
900	2.4	3.7	1050	1.5	2.3	750	2.9	14.1	1030	3.1	12.5				1000	1.8	12.4	1030	5.4	10.4
950	2.1	3.3	1070	1.4	2.1	800	2.8	14.0							1050	1.6	12.0			
1000	1.8	2.8				850	2.8	13.8												
1050	1.5	2.4				900	2.7	13.7												
1065	1.4	2.2				950	2.5	13.5												
						1000	2.6	13.3												
						1030	3.5	13.3												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #255 23 October 1968 0622 EST Keystone			Ascn #256 23 October 1968 0825 EST Keystone			Ascn #257 23 October 1968 1002 EST Keystone			Ascn #258 24 October 1968 0633 EST Keystone			Ascn #259 24 October 1968 0852 EST Keystone			Ascn #260 24 October 1968 0944 EST Keystone			Ascn #261 24 October 1968 1051 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	5.6	7.3	Sfc	---	9.5	Sfc	---	10.8	Sfc	5.0	6.2	Sfc	---	8.9	Sfc	---	9.8	Sfc	---	14.0
50	5.8	8.0	50	---	9.0	50	---	10.4	50	4.7	6.2	50	---	7.8	50	---	9.6	50	---	12.9
100	5.8	8.2	100	---	8.6	100	---	10.0	100	4.4	6.0	100	---	7.7	100	---	10.0	100	---	12.3
150	5.5	7.8	150	---	8.1	150	---	9.5	150	4.6	6.6	150	---	8.4	150	---	10.4	150	---	11.9
200	5.5	7.7	200	---	7.8	200	---	9.1	200	5.3	9.0	200	---	9.4	200	---	10.2	200	---	11.4
250	5.3	7.4	250	---	7.3	250	---	8.6	250	5.2	9.4	250	---	9.6	250	---	9.8	250	---	10.9
300	5.0	7.0	300	---	6.8	300	---	8.1	300	5.6	10.6	300	---	10.2	300	---	9.4	300	---	10.3
350	4.9	6.7	350	---	6.4	350	---	7.6	350	5.6	10.6	350	---	10.2	350	---	9.3	350	---	10.1
400	4.6	6.4	400	---	5.9	400	---	7.1	400	5.2	10.2	400	---	9.9	400	---	8.9	400	---	9.8
450	4.3	5.9	450	---	5.4	450	---	6.8	450	4.9	9.9	450	---	9.8	450	---	8.6	450	---	9.2
500	4.0	5.6	500	---	5.3	500	---	6.3	500	4.6	9.4	500	---	9.3	500	---	8.4	500	---	8.7
550	3.7	5.1	550	---	4.9	550	---	5.8	550	4.5	9.1	550	---	8.9	550	---	8.5	550	---	8.2
600	3.3	4.9	580	---	4.6	600	---	5.4	600	4.1	8.6	600	---	8.6	600	---	8.5	600	---	7.8
650	3.0	4.5	600	---	5.2	650	---	5.0	650	3.9	8.2	650	---	8.3	650	---	8.2	650	---	7.7
700	2.7	4.2	650	---	5.0	700	---	4.5	700	3.6	7.8	700	---	7.8	700	---	7.8	700	---	7.8
750	2.4	3.8	700	---	4.6	750	---	3.9	750	3.2	7.4	750	---	7.4	750	---	7.3	750	---	7.5
800	2.1	3.4	750	---	4.1	800	---	3.4	800	2.8	6.8	800	---	7.0	800	---	6.9	800	---	7.1
850	1.8	3.0	800	---	3.8	850	---	3.0	850	2.7	6.5	850	---	6.6	850	---	6.4	850	---	6.7
900	1.5	2.7	850	---	3.4	900	---	2.7	900	2.3	6.0	900	---	6.2	900	---	6.2	900	---	6.3
950	1.1	2.3	900	---	2.9	950	---	2.6	950	2.0	5.6	950	---	5.9	950	---	5.7	950	---	5.8
1000	0.8	2.2	950	---	2.4	1000	---	1.8	1000	1.8	5.2	1000	---	5.5	1000	---	5.2	1000	---	5.4
1050	0.0	2.0	1000	---	2.1	1050	---	1.4	1040	1.6	5.0	1050	---	5.0	1040	---	4.9	1050	---	5.0
1100	-0.7	1.8	1050	---	1.9	1100	---	1.0												
1150	-1.2	1.6				1130	---	1.4												
1180	-1.2	1.4				1150	---	1.2												
						1200	---	0.9												
						1215	---	0.7												

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #262 25 October 1968 0737 EST Keystone			Ascn #263 25 October 1968 0854 EST Keystone			Ascn #264 26 October 1968 0643 EST Keystone			Ascn #265 26 October 1968 0817 EST Keystone			Ascn #266 26 October 1968 1023 EST Keystone			Ascn #267 29 October 1968 1041 EST Keystone			Ascn #268 29 October 1968 1206 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	6.3	7.2	Sfc	6.1	7.4	Sfc	4.1	5.7	Sfc	3.5	5.3	Sfc	6.1	7.4	Sfc	3.1	4.3	Sfc	3.1	5.4
50	6.1	7.1	50	6.0	7.3	50	3.9	5.6	50	3.3	5.1	50	4.2	6.2	50	2.6	3.9	50	2.7	5.1
100	5.8	6.8	100	5.9	7.1	100	3.6	5.3	100	2.9	4.7	100	3.7	5.6	100	2.4	3.6	100	2.4	4.8
150	5.4	6.4	150	5.7	6.7	150	3.3	4.9	150	2.7	4.2	150	3.3	5.0	150	1.9	3.1	150	2.1	4.3
200	4.8	6.4	200	5.2	6.1	200	3.0	4.6	200	2.4	3.8	200	3.1	4.5	200	1.5	2.6	200	2.0	3.8
250	4.2	6.1	250	4.9	5.6	250	2.8	4.2	250	2.0	3.4	250	2.6	3.9	250	1.5	2.3	250	1.6	3.4
300	4.4	6.3	300	4.6	5.2	300	2.3	3.8	300	1.6	3.0	300	2.2	3.4	300	1.1	1.8	300	1.2	3.0
350	3.9	6.0	350	4.2	4.9	350	2.2	3.4	350	1.4	2.6	350	1.9	3.0	350	0.9	1.5	350	0.7	2.3
400	3.4	5.4	400	3.8	4.4	400	1.8	3.0	400	0.7	2.1	400	1.8	2.7	400	0.6	1.1	400	0.5	1.9
450	3.2	5.0	450	3.5	4.0	450	1.5	3.1	450	0.3	1.9	450	1.3	2.2	450	0.7	0.8	450	0.2	1.5
500	3.0	4.6	500	3.1	3.6	500	1.3	2.9	500	0.2	1.5	500	1.4	1.8	500	0.3	0.3	500	0.2	1.2
550	2.7	4.1	550	2.6	3.2	550	0.8	2.7	520	0.2	1.3	550	1.1	1.1	550	---	0.0	550	-0.1	0.5
600	2.4	3.7	600	2.4	2.9	600	0.4	2.2	540	0.6	1.6	600	0.7	0.7				600	---	0.0
650	2.3	3.3	650	2.0	2.8	650	0.2	1.8	550	1.0	1.6	650	0.0	0.2				650	---	- 0.4
700	1.8	2.8	700	1.6	2.2	700	-0.1	1.4	600	0.5	1.3	700	---	- 0.1				700	---	- 1.2
750	1.5	2.4	750	1.4	1.9	750	-0.6	0.8	650	-0.3	0.9	740	---	- 0.2				750	---	- 1.7
800	1.3	2.0	800	1.1	1.5	800	-0.8	0.4	700	-0.7	0.4							800	---	- 2.2
850	1.0	1.6	850	0.7	1.1	850	---	0.0	750	---	- 0.1							850	---	- 2.4
900	0.7	1.2	900	0.5	0.8	900	---	- 0.4	800	---	- 0.5									
			950	0.3	0.9	950	---	- 0.7	850	---	- 0.9									
			1000	0.0	0.7	1000	---	- 1.2	900	---	- 1.4									
			1035	-0.5	0.5	1040	---	- 1.7	950	---	- 1.8									
									1000	---	- 2.2									
									1045	---	- 2.7									

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #269 30 October 1968 0722 EST Keystone			Ascn #270 30 October 1968 0906 EST Keystone			Ascn #271 30 October 1968 1035 EST Keystone			Ascn #272 31 October 1968 0827 EST Keystone			Ascn #273 31 October 1968 1034 EST Keystone			Ascn #274 31 October 1968 1145 EST Keystone			Ascn #275 31 October 1968 1310 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	---	---	Sfc	3.9	5.0	Sfc	3.8	5.6	Sfc	---	---	Sfc	4.4	6.3	Sfc	4.1	8.3	Sfc	4.8	9.8
10	3.6	4.5	50	3.8	4.8	50	3.4	5.2	20	---	- 1.3	50	4.1	5.9	50	3.6	7.8	50	4.7	9.6
50	3.4	4.2	100	3.3	4.3	100	3.3	5.0	50	---	- 1.5	100	3.9	5.6	100	3.3	7.3	100	4.2	9.1
100	3.2	4.0	150	3.2	4.1	150	3.0	4.5	100	---	- 1.4	150	4.2	6.1	150	3.0	6.8	150	3.9	8.6
150	3.0	3.8	200	2.9	3.7	200	2.6	4.2	150	1.3	1.6	200	3.8	6.0	200	2.6	6.4	200	3.7	8.3
200	2.7	3.4	250	2.4	3.2	250	2.3	3.8	200	2.4	3.1	250	3.7	6.0	250	2.7	6.2	210	4.0	8.6
250	2.4	3.1	300	1.7	2.3	300	1.9	3.2	250	3.5	4.9	300	3.0	5.8	300	2.2	5.7	250	3.6	8.2
300	2.2	3.0	350	1.5	2.0	350	1.6	2.7	300	4.0	5.0	320	3.2	5.6	350	2.0	5.3	300	3.0	7.4
350	2.1	2.9	400	1.3	1.5	400	1.3	2.4	350	4.1	4.9				400	1.5	4.7	350	2.9	7.1
400	1.8	2.7	450	1.1	1.1	450	1.0	2.0	400	4.1	4.8				450	1.2	4.2	400	2.7	6.8
450	1.7	2.5	500	0.8	0.8	500	1.0	1.7	450	4.3	4.7				500	1.1	3.8	450	2.4	6.2
500	2.1	2.3	550	0.0	0.4	550	1.1	1.1	500	4.2	4.6				550	0.8	3.4	500	1.7	5.4
550	1.7	2.0	600	-0.2	0.1	600	0.6	0.8	550	4.0	4.3				600	0.4	2.9	550	1.8	5.2
600	1.1	1.6	650	---	- 0.1	650	-0.3	0.3	600	3.9	4.2				650	0.0	2.6	600	1.1	4.4
650	1.0	1.3	700	---	- 0.5	700	-0.6	0.2	650	3.6	3.8				700	-0.4	2.1	650	0.6	4.0
700	0.8	1.0	750	---	- 1.0	750	---	- 0.2	700	3.3	3.4				750	-0.6	1.8	700	0.4	3.6
750	0.2	0.6	800	---	- 1.2	800	---	- 0.6	750	2.8	3.0				800	-1.0	1.2	750	0.1	3.3
800	-0.3	0.2	850	---	- 1.5	850	---	- 1.2	800	2.5	2.6				850	-1.3	0.7	800	-0.1	2.9
850	---	- 0.4	900	---	- 1.8	900	---	- 1.8	850	2.1	2.2				900	-1.7	0.3	850	-0.5	2.4
900	---	- 0.9	950	---	- 2.2	950	---	- 2.1	900	1.8	1.8				950	-2.3	0.7	900	-0.5	2.3
950	---	- 1.2	1000	---	- 2.6	1000	---	- 2.6	950	1.6	1.6				1000	-2.7	0.5	950	-0.8	1.6
1000	---	- 1.7	1040	---	- 3.0	1050	---	- 3.0	1000	1.2	1.5							1000	-1.1	1.3
1050	---	- 2.3							1050	2.1	2.6							1020	-0.9	2.9
									1070	2.6	2.8							1050	-1.7	2.1
																		1070	-1.3	0.7
																		1090	-0.8	1.6

Table 8 (continued). HELICOPTER TEMPERATURE PROFILES

Ascn #276 1 November 1968 0717 EST Keystone			Ascn #277 1 November 1968 0840 EST Keystone			Ascn #278 1 November 1968 1026 EST Keystone			Ascn #279 1 November 1968 1203 EST Keystone			Ascn #280 2 November 1968 0744 EST Keystone			Ascn #281 2 November 1968 1020 EST Keystone			Ascn #282 2 November 1968 1245 EST Keystone		
Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)	Z(m)	WB(°C)	T(°C)
Sfc	2.4	3.4	Sfc	---	---	Sfc	12.0	15.4	Sfc	16.1	20.3	Sfc	12.6	13.4	Sfc	12.0	16.2	Sfc	11.2	17.6
50	2.2	3.2	10	3.3	4.7	50	11.7	15.1	50	16.1	20.0	50	12.7	13.5	50	11.4	15.5	50	11.1	17.4
80	2.2	3.0	50	3.2	4.6	100	11.5	14.8	100	15.9	19.7	100	12.6	13.4	100	11.3	15.0	100	10.7	16.9
100	4.1	6.0	100	5.5	7.3	150	11.8	14.8	150	15.5	19.1	150	12.6	13.3	150	11.3	14.8	150	10.6	16.5
150	5.4	7.6	150	6.0	8.0	200	12.0	14.9	200	15.3	18.7	200	12.5	13.2	200	10.8	14.2	200	10.1	15.7
200	6.2	8.6	200	7.5	9.6	250	12.6	15.0	250	15.5	18.6	250	12.3	13.1	250	10.4	13.7	250	9.9	15.2
250	7.3	9.8	250	9.3	11.2	300	12.7	14.9	300	14.7	17.9	300	12.0	12.7	300	10.1	13.4	300	9.7	14.8
300	9.0	11.3	300	10.3	12.0	350	12.6	14.6	350	14.5	17.4	350	11.8	12.4	350	9.8	12.8	350	9.3	14.3
350	10.2	12.4	350	11.7	13.4	400	12.4	14.0	400	14.1	16.8	400	11.5	12.1	400	9.8	12.3	400	9.1	13.8
400	12.2	14.3	400	13.2	14.8	450	12.4	13.8	450	13.9	16.3	450	11.0	11.8	450	9.6	12.0	450	9.0	13.6
450	13.2	15.4	450	13.6	15.2	500	13.2	14.4	500	13.6	15.8	500	10.4	11.3	500	8.9	11.6	500	8.7	13.0
500	13.3	15.4	500	13.4	15.0	550	13.3	14.3	550	13.4	15.4	550	9.9	10.9	550	8.1	11.0	550	8.2	12.4
550	13.8	15.8	550	13.4	14.8	600	13.2	14.0	600	13.1	14.9	600	9.0	10.5	600	7.5	10.8	600	8.1	12.0
600	14.0	15.8	600	13.4	14.8	650	13.1	13.8	650	12.8	14.3	650	9.1	10.5	650	7.2	10.3	650	7.7	11.3
650	13.6	16.0	650	13.4	14.9	700	13.1	13.9	700	13.0	14.4	700	9.5	10.2	700	7.1	9.9	700	7.5	10.8
700	13.1	15.6	700	13.1	14.6	750	13.2	14.4	750	12.4	13.6	710	9.1	9.9	750	7.2	9.2	750	7.1	10.2
750	12.4	15.4	750	13.0	14.4	760	12.7	14.9	800	12.2	13.6	750	8.9	10.3	770	7.1	9.1	800	6.5	9.8
800	11.8	15.1	800	13.0	14.4	800	12.8	14.7	850	11.9	13.8	800	7.8	10.8	800	5.8	9.4	850	6.4	9.2
850	11.7	14.9	850	12.8	14.2	850	12.5	14.3	900	11.7	13.6	850	8.5	10.5	850	4.8	9.0	900	6.0	8.7
900	11.3	14.3	900	12.3	13.7	900	11.9	13.8	950	11.6	13.4	900	6.8	10.6	900	4.2	9.0	950	5.7	8.1
950	10.9	13.8	950	12.0	13.4	950	11.6	13.4	1000	11.4	13.0	950	6.3	10.5	950	3.6	8.8	1000	5.5	7.7
1000	10.8	13.4	1000	11.6	13.1	1000	11.5	13.0				1000	5.8	10.8	960	4.4	8.4	1040	4.7	7.5
1010	10.7	13.3	1020	11.5	12.9	1030	11.1	12.6				1035	5.0	11.4	990	3.7	9.2			
															995	5.1	7.7			
															1000	3.5	8.8			
															1005	4.8	7.6			
															1010	3.7	9.0			
															1050	4.5	9.1			

PILOT BALLON MEASUREMENTS

Pilot-balloon measurements of the winds aloft were made at the Keystone Station during nearly all experiments. Depending on prevailing meteorological conditions and the length of flights, as few as one and as many as eleven ascensions per series day were made, usually at 30-minute intervals. Most of the pilot ballons were tracked by the double theodolite technique; when fog prevented visibility between sites, single theodolite releases were made. Similarly, when one theodolite lost the balloon prematurely, the computer calculated the remaining portion of the run as a single using the previously determined ascension rate.

Table 9 lists the winds aloft in increments of 50 meters above the stack base. The wind speed and direction for these heights were obtained from the original data by interpolating between the 30-second readings.

Table 9. PILOT BALLOON MEASUREMENTS

Symbols

Ascn #	:	Letter designates power plant, i.e., K = Keystone. Ascensions consecutively numbered beginning with #1 each day.
EST	:	Release time of pilot balloon.
Single	:	Balloon tracked by one theodolite; standard ascension rate.
Double	:	Balloon tracked by two theodolites; calculated ascension rate.
Combined	:	Ascension started as double but terminated as single; calculated ascension rate for double portion used for single portion.
Z (m)	:	Height above stack base elevation in whole meters.
D (°)	:	Wind direction to nearest tenth degree of azimuth.
S (mps)	:	Wind speed to nearest tenth meter per second.
Sfc	:	Surface wind direction and speed determined by hand-held anemometer.
---	:	Missing data.

Table 9. PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-1 14 Mar 68 0830 EST Single D(°)	S(mps)	Ascn #K-2 14 Mar 68 0900 EST Single D(°)	S(mps)	Ascn #K-3 14 Mar 68 0930 EST Single D(°)	S(mps)	Ascn #K-4 14 Mar 68 1000 EST Single D(°)	S(mps)	Ascn #K-1 15 Mar 68 0730 EST Single D(°)	S(mps)	Ascn #K-2 15 Mar 68 0800 EST Single D(°)	S(mps)	Ascn #K-3 15 Mar 68 0830 EST Single D(°)	S(mps)	Ascn #K-4 15 Mar 68 0900 EST Single D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	Sfc
50	205.2	1.2	270.3	1.1	268.2	1.3	216.8	1.4	207.0	1.1	218.5	0.8	227.9	1.6	226.2	1.6	50
100	237.0	1.8	265.1	1.6	258.2	1.8	215.1	2.2	208.0	2.6	215.3	2.6	225.3	3.6	229.8	3.1	100
150	275.3	3.2	252.0	1.5	232.2	1.7	212.0	2.4	208.8	4.4	213.6	5.3	223.1	6.3	233.9	4.6	150
200	255.1	3.9	268.2	1.2	214.5	1.9	220.5	2.6	216.4	6.7	219.7	7.6	227.0	8.6	237.0	6.6	200
250	247.3	4.6	290.7	1.8	208.9	1.9	228.3	2.9	225.3	9.2	226.6	10.0	231.0	11.1	239.9	9.0	250
300	247.9	4.8	298.8	3.2	214.1	1.4	235.1	3.1	234.3	12.1	233.5	12.6	234.9	13.9	242.4	11.8	300
350	253.7	4.6	307.3	4.9	233.2	1.7	239.2	3.0	240.0	13.6	239.7	12.6	238.9	16.0	248.2	14.0	350
400	254.9	4.5	307.4	5.4	246.8	2.1	234.3	3.0	244.9	14.9	242.7	15.6	242.2	18.1	252.3	15.5	400
450			304.1	5.2	256.9	2.5	227.3	3.1	248.7	16.0	244.4	19.2	246.6	19.0	257.0	16.4	450
500			300.8	5.3	266.7	2.7	233.0	3.3	249.3	17.2	251.5	18.1	259.4	16.6	265.9	17.1	500
550			297.1	5.2	283.5	3.3	255.3	2.6	254.9	16.8	257.6	17.5	268.4	17.0	265.3	16.3	550
600			293.8	5.1	289.4	4.1	279.1	3.6	262.9	14.9	262.9	17.0	273.9	16.3	265.5	15.8	600
650			291.4	5.0	287.3	4.9	279.6	6.1	273.3	12.5	267.4	16.4	278.5	14.2			650
700			291.1	5.4	286.0	5.4	265.6	8.6	275.1	13.2	271.1	14.6	283.0	14.5			700
750			289.0	6.0	281.7	5.5	271.4	8.9	276.9	13.4	275.4	14.8	275.6	14.4			750
800			287.5	6.5	280.0	5.7	286.8	9.8	280.6	13.3	275.6	15.0	280.7	15.4			800
850					279.4	6.1			284.0	13.1	275.7	14.9	288.5	16.8			850
900					276.1	6.4			282.4	12.8	283.1	14.7	280.0	15.8			900
950					277.8	6.4			283.4	14.1	280.4	14.4	283.1	15.0			950
1000					284.1	6.7			285.1	13.8	280.5	14.4	283.6	14.8			1000
1050					294.4	7.3			286.6	14.0	281.8	14.0	282.8	14.8			1050
1100					305.5	8.2			287.1	15.1	283.2	12.7	282.2	14.9			1100
1150					307.5	9.1			288.7	14.0	284.0	12.7	284.8	15.3			1150
1200									288.9	13.9	286.7	12.8	285.6	15.5			1200
1250									288.6	14.9	287.7	12.8	285.5	16.9			1250
1300									288.6	16.3	287.3	13.2	285.9	17.5			1300
1350									289.1	16.7	287.4	15.2	289.8	13.6			1350
1400									294.6	13.6	289.0	15.6	291.0	16.1			1400
1450									291.6	13.7	291.5	16.0					1450
1500									288.2	13.7							1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-5 15 Mar 68 1000 EST Combined D(°)	S(mps)	Ascn #K-6 15 Mar 68 1030 EST Single D(°)	S(mps)	Ascn #K-7 15 Mar 68 1100 EST Single D(°)	S(mps)	Ascn #K-1 16 Mar 68 0730 EST Double D(°)	S(mps)	Ascn #K-2 16 Mar 68 0800 EST Double D(°)	S(mps)	Ascn #K-3 16 Mar 68 0830 EST Single D(°)	S(mps)	Ascn #K-1 18 Mar 68 0730 EST Double D(°)	S(mps)	Ascn #K-2 18 Mar 68 0733 EST Single D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---		0.0		0.0	----	---		0.0		0.0	Sfc
50	201.6	5.5	193.2	3.0	----	---	173.9	1.5	185.9	1.6	----	---	345.2	2.3	346.5	1.6	50
100	197.8	5.7	196.2	4.9	172.4	1.7	174.5	3.0	184.8	3.3	241.7	0.5	353.2	1.7	349.1	2.4	100
150	191.9	6.2	201.3	5.7	172.4	5.3	176.6	4.3	183.6	5.5	241.7	1.8	005.4	3.1	355.2	2.2	150
200	194.6	7.0	210.7	7.3	208.7	9.2	177.0	6.2	187.7	7.4	193.2	6.0	008.3	5.2	330.7	4.8	200
250	200.7	6.8	214.2	8.7	218.7	13.6	194.0	8.2	192.0	8.0	188.9	10.0	013.1	6.4	352.9	5.9	250
300	204.6	6.3	214.5	9.7	221.0	16.6					189.6	12.6			033.7	8.6	300
350	211.2	8.2	219.7	11.6	219.3	12.9					192.7	13.9			021.9	9.1	350
400	215.9	11.1	218.1	12.2	218.6	12.4					196.8	15.3			020.7	10.7	400
450	219.3	14.8	214.2	12.7	218.5	14.0					200.9	16.8			025.7	13.2	450
500	223.2	14.4	215.4	15.4	217.1	16.0					203.5	18.1			033.2	17.0	500
550	217.9	17.3	218.4	14.7	216.3	16.8					211.7	17.8			031.4	24.2	550
600	215.5	20.3	219.3	14.5	216.3	16.9					213.9	18.0					600
650	220.0	20.3	218.7	16.5	216.6	15.7					210.4	19.0					650
700	221.8	20.0	223.6	23.2	213.2	11.1					219.2	20.8					700
750	222.3	23.8	232.5	11.9	218.0	12.1					222.2	18.2					750
800	222.8	25.4	239.8	9.2	217.5	8.5					229.0	16.4					800
850			235.0	13.6	216.2	4.4											850
900			238.4	14.2	231.2	10.5											900
950			247.5	12.7	232.3	11.8											950
1000			248.8	13.1	237.5	12.3											1000
1050			249.0	13.2	241.3	14.7											1050
1100			252.4	12.1	241.2	19.2											1100
1150			253.0	10.4	242.6	20.1											1150
1200			240.2	10.6	246.9	17.7											1200
1250			231.5	11.8	247.8	15.1											1250
1300			227.9	13.0	243.8	13.3											1300
1350			225.1	13.2	238.7	13.0											1350
1400			223.4	13.4													1400
1450			223.7	13.6													1450
1500			225.5	13.8													1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 18 Mar 68 0800 EST Double		Ascn #K-4 18 Mar 68 0830 EST Double		Ascn #K-5 18 Mar 68 0900 EST Double		Ascn #K-6 18 Mar 68 0930 EST Double		Ascn #K-7 18 Mar 68 1000 EST Single		Ascn #K-8 18 Mar 68 1032 EST Single		Ascn #K-1 19 Mar 68 0735 EST Double		Ascn #K-2 19 Mar 68 0800 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0	----	---	----	---	----	---		0.0		0.0		0.0	Sfc
50	340.2	0.9	348.5	1.3	010.5	2.6	002.1	4.6	----	---	332.3	0.9	054.9	0.1	339.4	0.2	50
100	340.2	1.8	348.5	2.5	011.5	4.9	002.9	5.1	044.4	0.4	331.9	1.5	079.0	0.4	049.4	0.6	100
150	349.8	2.7	348.6	3.8	012.9	5.2	002.3	5.5	044.4	1.3	331.0	1.6	280.3	0.3	082.5	0.4	150
200	355.2	4.9	350.4	4.4	359.7	4.7	000.4	5.9	024.4	1.8	000.4	1.9	230.3	1.8	196.8	0.9	200
250	001.0	6.1	353.3	5.3	357.8	5.0	007.8	5.4	003.2	2.1	020.5	2.6	214.4	1.3	178.2	0.9	250
300	005.5	7.3	356.4	6.4	002.5	5.7	010.9	5.0	342.9	2.7	031.0	3.6	187.2	0.7	140.8	1.0	300
350	010.6	8.5	003.3	7.5	007.6	6.5	007.5	5.9	009.2	4.2	027.4	5.1	111.4	0.5	155.7	1.5	350
400	015.8	9.7	009.6	8.7	016.6	7.8	034.7	11.0	031.9	6.8	035.6	6.1	058.5	2.2	156.1	1.8	400
450	021.0	10.9	018.5	10.4	026.3	9.9	039.3	13.1	044.1	10.5	045.8	6.9	051.6	1.9	105.5	1.3	450
500	025.6	12.2	027.5	12.7			041.5	12.9	048.1	13.5	047.0	7.1	022.2	1.7	064.3	1.4	500
550	031.5	13.5	034.0	15.0			046.6	14.2	048.4	14.4			358.7	1.8	035.4	1.5	550
600	034.2	15.5	040.7	16.2			049.3	15.7	047.4	13.8			000.3	1.7	032.9	1.6	600
650	036.2	17.4	043.6	17.7			047.8	17.6	045.2	12.5			007.0	1.6	025.2	1.6	650
700	036.5	18.2	043.3	19.4			043.8	18.4	042.5	13.5			349.3	1.9	003.7	1.8	700
750	036.1	18.4	037.7	17.1			042.7	19.1	037.8	11.6			347.9	1.8	350.5	2.1	750
800	037.3	18.5	037.1	18.3			039.7	16.5	031.9	10.7			032.6	1.1	353.7	1.9	800
850	038.7	18.7	037.9	20.2			039.9	19.1	028.3	11.3			034.0	3.1	019.8	1.4	850
900	039.1	17.4	038.7	22.2			040.5	20.8	028.8	12.9			042.9	3.0	040.5	1.8	900
950	038.8	17.5	038.8	18.9			041.1	21.2	018.6	9.4			046.4	2.6	094.4	2.7	950
1000	037.5	20.1	039.4	16.7					016.2	9.7			030.9	2.7	048.6	2.6	1000
1050	036.5	22.6	040.7	18.4					020.1	11.0					018.8	3.8	1050
1100	035.0	13.2	037.5	18.7					026.0	11.5					018.3	4.3	1100
1150	033.3	17.4	034.0	19.2					031.8	12.5					021.7	4.2	1150
1200	032.3	21.6	031.6	20.5					030.4	13.2					015.3	4.2	1200
1250	031.4	23.5	029.6	20.7					029.6	12.6					007.7	6.0	1250
1300	029.7	19.9	027.9	18.7											003.9	6.7	1300
1350	028.3	18.0	026.5	16.7											002.3	6.8	1350
1400	028.7	19.5	025.1	15.7											002.8	6.9	1400
1450	029.1	21.0	024.5	19.3											358.6	7.1	1450
1500	022.0	14.2	024.2	22.9													1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 19 Mar 68 0830 EST Combined		Ascn #K-4 19 Mar 68 0900 EST Combined		Ascn #K-5 19 Mar 68 0930 EST Combined		Ascn #K-1 20 Mar 68 0730 EST Double		Ascn #K-2 20 Mar 68 0800 EST Combined		Ascn #K-1 25 Mar 68 0730 EST Single		Ascn #K-2 25 Mar 68 0800 EST Single		Ascn #K-3 25 Mar 68 0830 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0	----	---	----	---	----	---	Sfc
50	250.8	0.3	015.2	0.4	340.4	0.2	136.4	0.9	355.7	0.3	----	---	----	---	196.2	2.0	50
100	191.3	0.4	091.2	0.5	135.2	0.7	172.0	1.4	255.8	0.4	171.0	2.3	152.6	2.7	196.2	4.0	100
150	190.3	0.7	147.9	1.0	169.5	1.9	209.0	2.8	223.6	1.8	171.0	7.3	152.6	8.7	200.4	4.2	150
200	218.9	1.2	183.2	1.9	215.1	2.2	225.3	5.3	219.6	3.2	186.6	8.2	221.5	6.9	210.4	3.8	200
250	219.4	3.3	215.4	2.8	218.7	2.8	219.3	6.6	216.4	5.8	209.8	9.3	244.6	9.8	223.2	3.8	250
300	218.5	1.9	209.2	1.0	214.2	1.0	223.1	7.6	216.8	8.1	233.4	12.3	237.5	9.8	235.0	5.4	300
350	203.4	1.3	196.9	1.0	215.1	1.4	229.6	9.5	222.4	8.6	240.0	12.5	242.1	10.8	247.6	7.8	350
400	186.5	1.5	169.1	1.2	182.8	1.6	234.2	11.2	225.6	8.8	244.4	11.7	248.2	11.2	253.7	9.3	400
450	157.3	1.3	167.4	0.9	207.4	1.0	237.1	12.4	228.4	10.8	247.8	10.3	254.2	10.8	253.6	9.2	450
500	188.4	0.9	212.6	0.3	234.0	0.3	235.6	13.7	232.7	13.0	250.0	9.0	254.4	8.3	248.9	8.2	500
550	263.0	0.1	063.6	0.3	196.6	0.6	232.7	14.7	236.8	15.0	248.2	8.3	256.4	9.1	256.0	6.9	550
600	002.9	0.4	025.1	0.7	333.1	0.7	230.8	15.2	239.0	16.6	248.0	8.3	248.5	9.4	245.3	8.2	600
650	015.5	0.6	345.8	1.1	033.2	0.3	229.4	15.2	242.1	16.8	250.2	8.8	235.3	8.9	245.6	9.3	650
700	346.3	0.9	342.8	1.0	165.8	0.7	228.5	15.0			251.4	9.3	275.1	9.0	244.9	10.4	700
750	082.1	1.4	010.6	0.9	037.6	0.2	226.2	14.6			253.4	8.0	252.7	9.6	245.1	10.7	750
800	360.0	0.9	055.8	0.9			226.6	14.8			251.9	7.8	247.3	10.4	246.4	10.2	800
850	319.4	2.2	083.0	1.3			229.9	13.8			250.0	8.1	250.1	11.2	249.3	9.9	850
900	351.8	1.2	086.0	1.7			235.9	12.4			253.6	9.5	251.3	12.2	250.6	13.1	900
950	055.4	1.4	071.0	1.9			241.7	11.9			257.8	10.4	254.8	11.5	251.2	17.0	950
1000	039.8	1.5	037.3	2.4			252.1	10.3			260.8	10.0	260.6	10.6	256.1	15.7	1000
1050	042.8	1.9	017.2	2.9			247.0	14.6			265.9	9.6	266.4	10.6	267.2	12.0	1050
1100	046.6	2.6	006.7	3.3			269.3	8.7			273.6	9.9	270.4	11.1	271.4	12.1	1100
1150	033.5	3.0	360.0	4.3			255.7	13.4			278.8	10.1	278.9	10.9	279.7	11.7	1150
1200	024.2	3.6	356.9	5.5							284.3	10.4	267.7	10.2			1200
1250	010.3	4.8	000.4	5.7							289.9	10.8	273.7	10.4			1250
1300	007.0	8.2	355.7	6.0							295.4	11.7	290.2	11.5			1300
1350	005.8	8.5	348.9	6.2							299.6	13.7	295.9	12.0			1350
1400	349.0	2.6									209.2	13.4					1400
1450	357.2	5.9															1450
1500	353.1	6.7															1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-4 25 Mar 68 0900 EST Combined		Ascn #K-5 25 Mar 68 0930 EST Combined		Ascn #K-6 25 Mar 68 1000 EST Double		Ascn #K-7 25 Mar 68 1030 EST Combined		Ascn #K-7A 25 Mar 68 1030 EST Single		Ascn #K-1 26 Mar 68 0800 EST Double		Ascn #K-2 26 Mar 68 0830 EST Double		Ascn #K-3 26 Mar 68 0900 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---		0.0	----	---	----	---	----	---		0.0		0.0		0.0	Sfc
50	228.0	1.6	213.0	1.4	144.4	2.3	232.0	3.2	231.8	3.4		0.0	193.9	0.6	----	---	50
100	228.0	3.2	213.0	2.9	144.4	4.6	230.3	6.0	227.0	5.9	183.2	2.5	192.3	2.3	219.0	1.8	100
150	231.1	4.9	215.8	3.2	279.9	8.7	218.6	6.3	219.8	7.4	191.4	6.1	193.2	4.5	219.0	5.7	150
200	234.1	6.2	220.0	3.1	261.9	5.3	220.4	6.6	221.4	9.7	199.1	8.8	201.2	8.7	216.2	7.2	200
250	238.2	6.0	219.8	3.3	234.5	3.7	218.9	6.3	221.2	11.6	203.6	10.3	205.6	10.6	214.3	8.2	250
300	242.7	6.2	217.4	3.7	235.5	3.5	224.2	5.6	219.7	13.0	206.8	11.5	209.7	11.3	213.0	8.8	300
350	247.1	6.6	215.7	4.3	231.6	3.6	256.8	3.0	219.6	13.3	211.0	13.0	214.0	11.7	217.5	10.9	350
400	251.4	6.9	215.7	4.8	227.0	3.9	240.2	4.9	220.6	11.5	216.7	13.7	221.2	11.9	222.2	12.6	400
450	255.8	7.1	220.4	4.5	216.5	4.0	240.0	6.3	225.5	8.2	224.6	12.9	232.9	11.8	227.1	14.2	450
500	253.8	7.4	229.0	4.9	213.4	4.0	251.8	4.4	252.1	4.9	229.2	12.8	235.0	14.0	232.6	15.8	500
550	246.8	7.7	237.7	6.2	215.7	3.7	252.9	6.1	264.1	3.4	231.6	13.5	236.2	12.3	238.3	14.7	550
600	240.1	9.2	240.7	7.8	217.1	4.5	256.0	7.5	249.7	4.9			234.8	12.9	243.3	13.5	600
650	235.4	11.1	239.9	9.6	223.8	5.9	263.0	6.6	240.9	8.6			234.4	13.5	245.4	13.0	650
700	238.3	10.9	236.3	10.8	232.4	8.1			251.9	5.8			233.9	14.7	241.8	12.9	700
750	248.0	9.6	238.9	12.7	240.4	11.6			254.4	7.0			232.9	17.7	238.1	13.9	750
800	245.1	11.3	242.6	14.7					255.2	8.8					236.6	14.7	800
850	292.7	6.8	246.6	14.8					257.6	10.0					236.2	14.8	850
900	280.0	6.9	230.3	17.1					263.8	9.0					235.0	13.9	900
950	278.0	7.3							267.9	8.0					236.8	15.6	950
1000	277.0	7.7													237.3	15.3	1000
1050	276.4	8.1													236.8	14.7	1050
1100	276.1	8.5													234.3	15.0	1100
1150	284.7	8.6													223.8	15.6	1150
1200	296.6	9.0													240.9	15.5	1200
1250	295.5	9.2													244.3	14.6	1250
1300	294.9	9.4													235.1	13.7	1300
1350	294.7	9.7													235.2	16.1	1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-4 26 Mar 68 0930 EST Double D(°)	S(mps)	Ascn #K-5 26 Mar 68 1000 EST Double D(°)	S(mps)	Ascn #K-6 26 Mar 68 1030 EST Single D(°)	S(mps)	Ascn #K-1 27 Mar 68 0704 EST Single D(°)	S(mps)	Ascn #K-2 27 Mar 68 0800 EST Single D(°)	S(mps)	Ascn #K-3 27 Mar 68 0830 EST Single D(°)	S(mps)	Ascn #K-4 27 Mar 68 0902 EST Single D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---		0.0		0.0		0.0		0.0	Sfc
50	209.1	2.6	220.6	2.3	----	---	232.0	0.5	212.4	1.1	181.7	0.8	152.0	0.9	50
100	210.6	4.9	220.6	4.6	205.8	2.1	242.7	1.6	225.7	2.0	211.5	1.3	188.1	1.3	100
150	216.9	5.8	222.5	5.7	205.8	6.6	247.8	3.3	243.4	2.8	244.0	2.3	230.1	2.5	150
200	218.5	7.1	224.9	6.3	215.0	5.1	262.1	6.4	256.8	4.0	255.0	3.6	251.2	2.8	200
250	218.5	8.2	226.6	6.9	227.2	5.0	267.1	9.2	262.7	6.1	257.9	5.3	263.9	3.2	250
300	220.8	8.2	226.5	7.1	233.0	6.4	269.7	11.6	264.9	8.9	258.2	7.4	269.8	3.8	300
350	224.7	7.4	224.8	7.1	222.1	5.2			269.3	10.8	267.1	8.4	270.2	5.1	350
400			228.4	8.7	222.9	6.5			274.5	12.5	272.7	10.1	282.4	6.7	400
450			231.6	9.3	229.0	8.6			279.8	13.7	277.4	11.6	294.1	8.4	450
500			234.7	10.8	235.9	8.3			284.6	13.2	288.0	11.3	297.4	9.0	500
550			235.8	11.9	234.1	9.0			289.9	11.9	294.3	10.0	300.4	7.7	550
600			234.9	12.3	230.4	8.8			295.1	10.4	299.7	8.5	303.3	6.4	600
650			227.2	10.7	225.2	7.6			299.8	9.1	304.5	7.2	305.2	5.7	650
700			224.1	10.6	219.5	7.5			303.5	8.8	306.4	6.8	307.1	5.7	700
750			225.0	11.9	221.9	6.9			304.2	8.7	308.4	7.3	310.6	5.8	750
800			224.5	13.9	226.6	6.7			304.5	8.7	310.7	7.6	314.0	5.9	800
850			223.9	16.1	229.9	7.4			305.1	8.7	313.1	7.9	316.2	6.3	850
900					229.1	9.0			305.9	8.8	314.5	8.4	316.4	6.9	900
950					228.0	9.8			308.2	8.9	313.2	9.3	312.6	7.3	950
1000									308.6	9.9	310.8	9.4	309.4	7.2	1000
1050									308.8	11.2	308.5	9.3	307.9	7.6	1050
1100									309.4	11.8	307.7	9.5	308.0	8.6	1100
1150									308.9	9.7	308.0	9.8	305.2	8.8	1150
1200									307.0	10.1	310.7	9.7	302.2	9.2	1200
1250									304.8	10.5	309.3	10.0	299.5	9.5	1250
1300									302.7	10.9	305.4	10.5	296.7	9.8	1300
1350									301.6	12.2	303.3	10.1	293.8	10.4	1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-5 27 Mar 68 0935 EST Single		Ascn #K-6 27 Mar 68 1000 EST Single		Ascn #K-7 27 Mar 68 1030 EST Single		Ascn #K-1 28 Mar 68 0729 EST Combined		Ascn #K-2 28 Mar 68 0800 EST Double		Ascn #K-3 28 Mar 68 0830 EST Combined		Ascn #K-4 28 Mar 68 0904 EST Double		Ascn #K-5 28 Mar 68 0933 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0	----	---	----	---		0.0		0.0		0.0	----	---	----	---	Sfc
50	303.0	1.5	002.2	1.7	----	---	183.6	1.0	187.6	1.1	204.1	1.5	194.8	2.6	200.8	2.5	50
100	310.5	2.9	352.6	1.9	195.5	2.1	189.5	3.9	194.5	3.4	204.1	4.0	202.8	4.0	205.0	4.4	100
150	318.7	4.4	286.0	1.0	195.5	6.8	196.6	6.1	201.6	5.9	206.8	6.4	211.1	5.0	210.8	5.7	150
200	312.2	4.8	293.6	2.4	284.6	2.9	208.0	7.8	212.7	7.7	212.6	7.6	217.5	6.2	217.8	7.0	200
250	309.2	4.5	296.5	3.0	316.4	4.6	225.4	9.3	224.8	9.6	219.3	9.0	222.1	8.7	219.8	8.0	250
300	310.4	3.6	299.1	2.7	282.7	3.0	235.7	10.4	233.3	11.1	233.6	13.3	231.3	10.3	218.1	8.5	300
350	326.9	3.0	313.3	3.4	290.0	2.7	243.3	11.1	240.3	11.5	240.3	17.3	235.2	10.6	220.4	8.7	350
400	333.1	3.6	323.1	4.3	285.2	2.2	248.8	11.0	246.8	13.3	242.2	17.3	240.1	12.6	223.8	8.9	400
450	332.4	4.4	328.4	5.2	280.7	2.1	251.9	11.1			244.1	17.0	242.2	13.3	229.1	10.0	450
500	340.7	2.8	328.8	5.6	306.0	3.8	253.7	11.5			246.3	16.2	247.1	12.7	234.2	11.6	500
550	341.6	4.8	329.7	5.2	305.0	1.5	259.7	13.4			248.6	15.7	252.3	12.7	235.9	12.0	550
600	340.6	6.9	331.6	4.9	334.4	1.7	261.9	11.9			251.0	15.7	253.6	14.8	239.0	11.8	600
650	340.1	7.9	334.5	4.9	334.2	5.1					253.0	17.6			244.8	12.0	650
700	343.8	7.3	338.8	4.9	329.2	4.5					254.7	19.1			251.8	13.8	700
750	345.2	7.1	342.2	4.8	328.5	4.2					256.5	19.2			252.7	14.6	750
800	349.0	6.8	342.0	5.0	329.3	3.9					258.5	19.2			252.3	15.0	800
850	354.2	6.5	339.0	5.3	329.1	3.9					261.2	19.2			254.2	15.1	850
900	356.6	6.3	335.8	5.9	324.8	4.0											900
950	359.0	6.3	337.6	5.9	328.6	4.4											950
1000	355.1	6.2	333.4	6.4	331.0	5.5											1000
1050	351.4	6.3	335.4	7.0	334.0	6.9											1050
1100	351.3	6.5	344.3	7.6													1100
1150	350.1	7.7	337.3	8.0													1150
1200	347.7	7.9	338.0	8.6													1200
1250	343.9	8.0	342.0	9.1													1250
1300	341.8	8.6	346.5	9.6													1300
1350	345.3	10.0	348.3	10.3													1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 29 Mar 68 0730 EST Double		Ascn #K-2 29 Mar 68 0759 EST Combined		Ascn #K-3 29 Mar 68 0830 EST Combined		Ascn #K-4 29 Mar 68 0900 EST Double		Ascn #K-5 29 Mar 68 0930 EST Double		Ascn #K-6 29 Mar 68 1000 EST Double		Ascn #K-7 29 Mar 68 1030 EST Double		Ascn #K-1 30 Mar 68 0700 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---		0.0	Sfc
50	198.2	2.0	208.8	3.5	211.2	4.7	226.6	4.6	211.2	3.1	219.5	3.7	214.0	1.6		0.0	50
100	203.9	4.2	211.5	6.2	211.2	9.3	221.5	6.9	212.1	5.3	217.3	6.1	214.0	3.3	228.9	0.7	100
150	208.2	6.1	216.3	7.6	213.7	9.5	215.6	7.3	213.5	6.6	218.6	6.8	215.4	4.7	229.1	2.3	150
200	213.1	6.4	219.5	9.2	216.8	9.1	216.5	7.5	220.9	7.8	227.5	6.5	216.8	5.9	238.2	1.3	200
250	218.7	8.0	228.6	8.8	218.5	9.5	225.9	7.9	221.5	8.5	233.8	6.7	217.8	7.1	241.3	0.7	250
300	222.6	10.1	231.0	10.6	219.9	10.1	233.5	10.3	220.3	8.7	233.3	7.8	219.8	3.2	210.6	0.5	300
350	229.1	12.1	233.0	12.2	226.4	10.8	236.5	11.6	218.9	8.2	232.9	8.8	221.3	3.7	346.0	1.8	350
400	236.9	13.6	236.0	12.6	234.8	11.7	236.1	9.2	225.8	8.9	235.1	9.5	222.9	4.3	358.0	3.3	400
450	242.6	14.3	240.1	13.8	239.5	12.6	238.8	10.0	233.3	10.2	238.2	10.2	224.8	4.8	004.6	4.5	450
500	246.4	15.0	244.1	15.6	242.8	13.5	242.5	10.7	239.0	10.4	241.2	10.6	226.0	5.3	002.3	5.3	500
550	252.0	15.0	249.0	14.5	245.3	15.5	245.8	11.5	244.7	10.0	244.7	10.3	228.1	5.9	001.2	5.9	550
600	259.0	15.1			247.2	17.5	244.6	13.1	249.5	10.2	245.7	10.4	228.7	5.6	000.8	6.4	600
650	263.2	16.8			258.0	18.6	247.3	16.2	252.0	11.0	245.7	10.9	229.3	5.3	000.8	7.1	650
700	266.1	20.3			268.5	17.9	249.8	19.6	251.5	12.1	249.4	11.7	231.8	6.9	360.0	7.5	700
750	268.1	24.0			283.2	13.7			254.3	13.3	254.2	12.3	233.5	9.2	360.0	8.0	750
800	276.9	15.8			277.2	15.4			262.1	14.6			236.6	11.0	001.3	8.5	800
850	274.4	17.8			273.1	15.8			267.3	16.5			239.9	12.6	002.3	8.7	850
900									267.5	19.6			242.4	14.1	000.2	8.3	900
950									267.6	22.8			244.2	14.2	001.2	9.0	950
1000													246.1	14.3	359.8	9.2	1000
1050													249.3	14.2	355.8	9.4	1050
1100													254.1	13.8	350.5	9.8	1100
1150													259.0	13.6	350.5	10.7	1150
1200															350.6	10.6	1200
1250															351.4	11.3	1250
1300															351.8	12.1	1300
1350															350.1	11.5	1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 30 Mar 68 0730 EST Single		Ascn #K-3 30 Mar 68 0830 EST Combined		Ascn #K-4 30 Mar 68 0900 EST Combined		Ascn #K-5 30 Mar 68 0930 EST Double		Ascn #K-6 30 Mar 68 1000 EST Double		Ascn #K-7 30 Mar 68 1030 EST Double		Ascn #K-1 1 Apr 68 0710 EST Single		Ascn #K-2 1 Apr 68 0730 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0	----	---	----	---	----	---	Sfc
50	150.7	0.4	166.8	0.9	229.7	1.2	148.0	0.6	070.0	0.3	267.1	2.2	354.9	4.6	359.3	4.2	50
100	200.9	0.9	172.4	1.2	231.0	2.0	148.0	1.3	071.8	0.4	281.2	1.7	002.0	9.0	356.7	5.7	100
150	231.0	2.2	291.1	0.7	229.3	2.0	158.6	1.6	113.0	0.2	268.4	1.0	009.8	13.6	353.8	7.0	150
200	236.3	2.5	288.2	1.4	237.3	1.9	182.7	1.6	172.2	0.2	299.1	0.6	011.5	12.3	356.5	7.5	200
250	234.2	2.2	247.5	1.9	254.5	1.4	217.6	1.4	160.5	0.4	004.1	0.8	007.4	12.0			250
300	217.5	1.3	256.0	1.3	300.1	0.9	214.5	1.5	158.3	0.5	344.4	1.5	358.7	13.6			300
350	236.9	0.2	311.6	0.4	333.5	1.1	219.7	1.9	248.3	0.2	315.2	2.1	358.5	22.6			350
400	004.4	1.2	349.7	1.4	346.5	2.4	227.1	2.4	297.7	0.6	322.9	3.6	357.4	26.0			400
450	002.8	2.6	346.6	2.9	354.5	3.3	239.6	3.0	298.4	1.1	316.2	4.2					450
500	005.0	3.7	000.1	3.8	005.1	4.0	254.6	2.9	297.4	1.6	317.1	4.3					500
550	005.9	5.1	357.3	4.8	004.7	4.7	285.3	1.6	307.2	2.0	318.7	3.2					550
600	008.5	5.9	355.8	5.2	357.7	5.2	323.0	2.4	313.0	2.4	325.7	1.7					600
650	010.9	6.2	355.5	5.7	353.5	5.4	336.4	3.6	321.9	3.0	348.3	1.0					650
700	001.1	7.3	358.0	7.6	353.1	5.4	335.4	4.2	327.0	3.1	342.5	2.5					700
750	359.4	7.8	359.0	8.2	355.3	5.1	337.7	4.2	332.1	2.8	341.0	4.0					750
800	358.3	8.8	357.3	8.3			345.1	5.0	342.6	2.3	339.3	4.6					800
850	358.0	9.6	351.3	8.6			343.3	4.6			337.9	5.1					850
900	000.4	8.1	353.6	8.7			350.5	4.3			335.6	5.4					900
950	359.5	9.8	355.6	8.9			352.5	4.7			330.2	5.1					950
1000	359.8	9.6	356.6	9.1			353.4	4.4			324.2	4.8					1000
1050	357.3	9.2	357.8	9.0			355.9	4.9									1050
1100	352.3	9.5	357.7	9.0													1100
1150	359.7	8.4	357.0	9.3													1150
1200	355.1	9.0	356.8	10.0													1200
1250	350.6	9.7	351.3	10.3													1250
1300	347.7	10.0	347.8	10.8													1300
1350	345.1	10.4	349.2	11.6													1350
1400			349.7	12.6													1400

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-3 1 Apr 68 0800 EST Double D(°)	S(mps)	Ascn #K-3A 1 Apr 68 0800 EST Single D(°)	S(mps)	Ascn #K-4 1 Apr 68 0900 EST Double D(°)	S(mps)	Ascn #K-4A 1 Apr 68 0900 EST Single D(°)	S(mps)	Ascn #K-5 1 Apr 68 0930 EST Single D(°)	S(mps)	Ascn #K-6 1 Apr 68 1000 EST Combined D(°)	S(mps)	Ascn #K-1 2 Apr 68 0710 EST Single D(°)	S(mps)	Ascn #K-2 2 Apr 68 0730 EST Double D(°)	S(mps)	Z(m)
																0.0	Sfc
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	087.3	0.4	50
50	001.6	2.8	001.9	2.8	357.5	5.2	357.7	5.1	----	---	324.1	8.0	301.5	5.5	171.9	1.3	100
100	001.6	5.6	003.4	5.3	358.3	8.9	358.7	8.6	332.7	1.0	323.4	10.9	291.7	5.1	197.9	3.0	150
150	004.9	7.1	005.1	7.7	000.6	9.3	000.3	10.3	332.7	3.2	323.0	11.5	175.8	3.4	210.2	4.8	200
200	001.7	8.3	000.5	8.4	359.7	10.5	359.7	11.0	285.6	3.0	323.7	11.8	197.9	5.1	220.3	6.0	250
250	357.5	9.2	356.8	8.5	001.9	11.3	000.6	12.8	261.7	2.8	324.9	12.4	212.4	6.4	232.6	5.7	300
300	355.2	9.6	353.4	8.1	002.1	11.5	002.2	15.7	245.3	1.2	325.4	12.5	224.8	7.1	248.8	5.0	350
350	354.1	9.5	353.4	6.9			001.7	15.1	350.2	1.8	324.1	11.0	229.7	6.3	248.7	4.8	400
400			357.2	8.2			002.6	13.3	001.4	4.0	320.9	8.9	242.1	5.2	248.9	4.5	450
450			359.9	10.2			003.9	11.4	003.5	5.9	305.2	5.2	260.4	5.1	259.6	3.9	500
500			357.3	8.7			001.6	11.2	009.2	7.1	305.6	5.6	263.2	7.3	268.5	3.5	550
550			001.0	8.1			008.4	11.1	010.8	7.3	309.1	7.7	262.3	3.0	280.6	3.8	600
600			004.4	6.8			011.1	11.0	012.9	7.7	311.6	10.5	286.3	1.4	291.0	4.6	650
650			006.6	4.9			007.4	11.0	015.6	8.3	312.4	12.0	288.4	4.0	317.8	4.2	700
700			008.1	6.6			006.9	12.4	017.0	8.6	308.7	8.7	285.3	4.7	322.8	4.4	750
750			013.1	7.8			002.5	11.3	019.0	8.9	304.0	8.9					
800			020.2	8.4			357.7	10.1	020.5	10.7	301.5	10.3			335.6	3.9	800
850			025.8	10.2			355.0	10.0	021.0	12.9	302.4	10.7			337.9	4.4	850
900			024.2	16.0			356.3	11.9	021.4	13.2	302.0	10.3			340.1	5.2	900
950			022.1	20.0			354.8	8.8	020.3	17.0	297.4	7.8			342.6	5.3	950
1000			020.9	22.5			357.3	6.1	017.5	19.1	301.0	9.3			338.8	4.4	1000
1050			021.2	21.7			004.1	7.0	015.5	20.1	303.8	11.0			318.7	4.0	1050
1100			022.9	17.8			007.5	11.3	015.3	20.0	308.7	12.8			322.3	3.6	1100
1150			018.5	20.5			019.9	9.3	014.2	17.9	313.0	14.8			321.9	4.1	1150
1200			019.3	18.6			026.3	13.9			315.5	11.1			321.7	4.6	1200
1250			020.7	17.2			028.1	17.7			318.6	9.4			322.1	5.0	1250
1300			020.4	17.5			028.4	19.6			320.2	11.3					1300
1350			016.8	19.9			027.0	20.3			320.8	13.6					1350
1400											321.7	16.0					1400
1450											323.2	18.8					1450
1500											324.7	16.2					1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 2 Apr 68 0758 EST Combined		Ascn #K-4 2 Apr 68 0830 EST Double		Ascn #K-1 3 Apr 68 0712 EST Single		Ascn #K-2 3 Apr 68 0730 EST Double		Ascn #K-3 3 Apr 68 0756 EST Double		Ascn #K-4 3 Apr 68 0830 EST Double		Ascn #K-5 3 Apr 68 0900 EST Single		Ascn #K-6 3 Apr 68 0930 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	Sfc
50	097.4	0.4	183.4	0.3	017.4	0.6	025.0	1.1	239.6	0.2	328.4	0.5	----	---	099.9	0.3	50
100	169.0	1.5	179.1	1.5	043.7	1.2	044.7	1.7	037.5	0.8	022.1	0.3	106.1	2.8	117.8	0.7	100
150	190.7	3.0	194.0	3.1	068.9	2.1	092.4	1.8	112.5	1.4	129.8	1.1	106.1	8.8	131.1	1.0	150
200	203.9	4.5	207.9	4.4	110.2	3.3	142.3	3.4	141.8	2.2	158.3	1.9	112.2	5.5	164.6	1.1	200
250	220.3	5.2	223.1	8.8	119.1	3.9	148.7	2.5	163.8	2.5	189.7	2.4	129.9	2.8	211.0	1.5	250
300	244.1	4.0	239.4	4.1	119.2	2.9	184.2	2.5	184.9	2.7	218.1	3.0	175.9	1.8	220.5	2.6	300
350	246.4	4.0	244.1	4.1	174.8	4.6	210.0	3.2	211.1	3.3	236.1	4.0	208.9	2.3	221.6	3.5	350
400	247.0	3.8			190.7	5.2	228.2	2.7	234.0	4.0	242.9	4.9	225.4	3.5	221.8	4.2	400
450	250.7	3.3			202.9	4.3	230.3	2.8	240.5	3.9	246.7	5.5	230.4	5.0	219.9	4.8	450
500	263.8	2.8			205.8	4.0	227.6	3.0	239.7	3.6	251.0	5.7	226.5	6.1	217.3	5.6	500
550	279.2	3.0			204.1	3.7	222.4	3.1	234.2	3.3	249.5	5.0	224.4	7.0	215.0	6.5	550
600	297.6	3.0			200.6	3.2	216.2	2.9	225.7	3.2	243.7	4.2	222.4	7.5	214.2	7.4	600
650	314.9	3.5			215.2	2.6	201.9	2.6	221.8	3.8	231.7	3.5	220.2	7.6	210.7	7.6	650
700	324.2	4.2			206.1	2.4	186.9	2.3	218.5	3.8	221.2	3.4	217.5	6.2	207.9	7.1	700
750	340.0	3.3			186.9	2.3	175.0	1.9	211.2	3.5	217.6	3.6	218.9	5.3	204.4	6.1	750
800	348.5	4.0			178.5	2.1	194.2	0.9	205.0	3.6	215.1	3.9	223.3	4.5	198.9	5.0	800
850	348.6	4.3					262.6	0.9	200.4	3.4	209.6	4.5	227.5	3.7	192.6	3.9	850
900	350.5	4.6					283.7	1.5	195.0	2.0	210.9	4.9	221.9	3.5	188.9	3.5	900
950	349.3	4.6					283.3	1.7	212.5	0.9	209.1	4.7	212.2	3.1	176.0	3.3	950
1000	337.2	3.9					272.2	1.9	245.8	0.9	204.7	4.0	197.3	3.4	174.9	3.8	1000
1050	327.8	3.0					253.7	2.2	256.0	1.0	198.3	2.9	188.8	3.7	152.6	3.1	1050
1100	324.3	2.9					244.0	2.4	249.5	1.1	196.3	2.0	187.7	3.9	159.2	3.8	1100
1150	323.5	2.9					260.0	1.9	237.3	1.9	196.2	1.4	188.8	4.6	152.6	3.9	1150
1200	322.1	3.0					262.5	2.1	244.6	1.8	199.1	1.3	184.0	4.2			1200
1250							257.8	2.4			201.4	1.5	170.1	3.2			1250
1300							251.6	2.4			202.9	1.7	149.6	2.7			1300
1350							247.1	2.5					151.1	2.8			1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-7 3 Apr 68 1000 EST Double		Ascn #K-8 3 Apr 68 1030 EST Double		Ascn #K-1 5 May 68 0700 EST Single		Ascn #K-2 5 May 68 0730 EST Combined		Ascn #K-3 5 May 68 0800 EST Double		Ascn #K-4 5 May 68 0830 EST Double		Ascn #K-5 5 May 68 0900 EST Double		Ascn #K-1 6 May 68 0630 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	209.2	2.5	222.8	2.5	----	---	053.6	2.5	031.1	1.8	018.1	1.7	025.8	1.7	195.5	0.0 0.7	50
100	210.3	3.6	216.2	4.1	----	---	053.6	5.0	031.1	3.7	018.7	3.4	025.8	3.4	239.0	1.6	100
150	212.5	3.4	212.8	3.1	088.2	5.1	052.8	5.5	034.7	4.6	028.7	4.7	032.4	4.6	296.2	3.2	150
200	213.2	3.7	223.6	3.0	059.6	4.6	053.1	5.9	038.1	5.6	037.8	4.7	042.0	5.4	318.8	4.9	200
250	213.0	4.2	213.5	4.1	059.6	5.7	057.8	7.0	041.3	6.7	043.8	6.0	042.8	6.6	333.9	6.7	250
300	203.3	3.8	222.7	4.7	059.6	6.8	060.9	7.6	052.2	7.0	051.7	5.7	045.5	6.6	345.1	5.7	300
350	184.7	3.5	208.9	4.0	057.6	7.1	063.6	8.0	065.6	7.4	062.2	6.2	048.7	6.3	355.8	5.8	350
400	172.5	4.8	193.1	4.0	063.2	8.8	067.9	9.4	076.6	8.8	073.9	6.7	051.7	6.1	352.2	6.7	400
450	174.2	5.2	191.7	4.0	068.9	11.1	071.1	11.0	079.2	10.1	081.5	6.9	060.2	6.7	343.8	7.2	450
500	179.4	5.7	178.6	3.2	069.7	11.3	072.8	11.3	079.7	11.3	081.8	6.9	066.3	7.3	336.7	6.1	500
550	184.5	6.5	176.6	3.5	070.7	11.7	074.9	10.9	079.2	11.0	084.6	7.7	070.1	7.5	333.0	6.7	550
600	181.7	5.5	169.6	5.6	070.1	11.8	077.8	9.8	078.3	9.7	083.1	8.5	073.5	7.4	328.7	6.7	600
650	179.9	5.0	163.5	4.7	067.8	11.1	073.9	8.7	076.2	7.3	082.3	7.9	071.2	6.7	322.4	6.1	650
700	179.7	5.0	160.8	5.2	066.8	9.8	072.1	6.7	076.1	6.4	080.2	6.7	064.6	6.0	313.4	5.6	700
750	175.3	4.7	140.4	3.7	067.3	9.4	069.7	5.3	073.5	4.6	074.4	5.6	061.8	6.6	309.2	6.2	750
800	164.3	4.3			063.0	7.0	062.6	4.5	067.1	3.9	068.9	3.9	059.2	6.5			800
850	163.4	4.3			046.6	4.0	040.7	2.3	063.7	5.1	061.1	2.8	055.4	5.3			850
900	164.7	4.4			034.3	3.7	044.9	3.7	036.6	1.9	055.5	3.0	043.0	4.0			900
950	164.0	4.3			012.1	2.5	033.7	3.6	015.8	2.5	038.0	1.9	028.4	3.5			950
1000	159.4	4.8					014.5	3.1	005.1	3.4	027.6	2.1	018.2	3.6			1000
1050	157.7	5.2					006.5	2.8	011.4	4.6	021.8	2.6	012.5	3.9			1050
1100	155.1	5.2					016.0	2.8	014.9	5.3	019.5	3.1	011.9	4.1			1100
1150	147.1	5.1					011.7	2.2	013.4	4.9	014.2	3.4	015.6	4.2			1150
1200	137.8	4.4					011.7	1.9	015.4	4.6	004.9	3.4	013.5	3.9			1200
1250	141.1	4.6					019.3	1.8	014.0	4.1	347.8	3.1	000.5	3.4			1250
1300	149.5	4.4					292.1	1.1	010.0	3.3	315.1	2.8	002.5	3.5			1300
1350	154.2	5.0					260.8	2.3	004.9	2.1			341.5	3.5			1350
1400	151.3	5.4					257.8	3.3	015.8	1.9							1400
1450							259.7	3.6									1450
1500							262.7	3.4									1500

Table 9 (continued). PILOT BALLON MEASUREMENTS

	Ascn #K-2 6 May 68 0700 EST Combined		Ascn #K-3 6 May 68 0730 EST Double		Ascn #K-4 6 May 68 0800 EST Double		Ascn #K-5 6 May 68 0830 EST Combined		Ascn #K-6 6 May 68 0900 EST Double		Ascn #K-1 7 May 68 0630 EST Double		Ascn #K-2 7 May 68 0700 EST Double		Ascn #K-3 7 May 68 0730 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0	----	---	----	---	----	---		0.0		0.0		0.0	Sfc
50	208.7	0.8	262.0	1.0	291.4	1.4	284.2	1.6	337.6	2.1	066.5	0.9	028.8	0.2	099.0	0.1	50
100	248.6	0.8	277.3	1.7	299.7	1.8	287.4	2.2	338.2	2.9	060.6	1.8	038.4	1.1	068.4	1.8	100
150	291.8	1.2	303.4	2.5	321.3	1.7	294.8	1.9	343.1	2.5	060.8	3.6	064.7	2.9	068.0	3.9	150
200	322.8	2.5	329.3	2.5	343.8	2.0	307.6	2.0	351.0	2.7	059.1	5.9	069.4	5.4	072.3	4.9	200
250	337.4	3.5	337.2	3.3	334.5	2.3	318.8	2.4	350.4	3.5	047.5	7.5	059.7	6.5	060.4	4.6	250
300	356.0	4.5	350.5	3.9	341.1	2.7	327.8	2.6	353.6	3.4	044.3	8.2	055.4	6.2	060.4	5.6	300
350	002.6	5.2	000.7	4.5	347.8	3.4	337.0	2.7	355.0	3.3	043.0	7.5	049.0	6.3	060.1	6.2	350
400	356.7	5.5	001.6	4.1	352.0	4.3	334.5	3.0	360.0	3.4	043.1	6.4	045.9	5.4	058.4	5.3	400
450	341.4	6.2	348.5	5.5	349.9	4.8	336.0	3.7	004.0	3.7	045.8	5.5	046.0	4.3	060.0	4.6	450
500	337.2	6.1	336.4	4.6	347.1	5.1	340.0	4.4	001.4	4.2	050.5	5.0	049.0	3.7	064.9	4.1	500
550	335.2	6.3	333.8	6.2	344.4	5.5	354.4	4.6	359.4	4.7	058.4	4.0	059.3	2.9	076.2	3.4	550
600	329.6	5.7	332.3	7.7	342.8	6.2	010.5	4.5	358.9	5.0	074.3	3.3	085.8	1.5	084.1	3.1	600
650			332.9	6.6	341.0	6.5	004.9	5.1	359.9	4.9	075.3	3.2	069.6	2.8	084.1	3.1	650
700			326.8	4.8	339.2	6.7	354.3	6.6	001.0	4.8	069.9	3.3	067.5	3.0	077.5	3.7	700
750			321.6	4.8	337.9	7.3	350.0	7.3			070.7	3.1	066.9	2.8	072.9	4.5	750
800			327.3	6.5	337.4	6.2	352.5	7.6			062.0	3.8	064.7	3.2	073.2	5.2	800
850					337.8	5.9	354.8	7.3			055.8	4.7	064.3	3.9	075.0	5.8	850
900					338.4	5.8	354.8	7.4			057.0	5.3	063.8	4.7	076.9	6.0	900
950					336.7	6.6	352.6	8.1			062.8	5.9	064.8	5.3	080.9	5.9	950
1000					335.3	8.0					061.9	7.5	067.2	5.7	087.5	5.8	1000
1050					337.9	7.9					065.5	6.7	072.0	5.9	094.5	6.1	1050
1100					339.5	8.4					071.4	6.3	078.0	6.2	098.5	4.8	1100
1150					338.7	8.2					074.8	5.5	086.4	5.6	099.0	3.2	1150
1200					336.4	8.2					071.7	4.2	086.9	3.8	084.4	1.9	1200
1250					334.3	9.0					059.6	3.6			056.0	2.3	1250
1300											047.9	2.4			038.3	2.6	1300
1350											036.7	2.9					1350
1400											035.4	3.8					1400
1450											033.1	4.2					1450
1500											029.3	4.0					1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-4 7 May 68 0800 EST Combined		Ascn #K-5 7 May 68 0830 EST Double		Ascn #K-6 7 May 68 0900 EST Double		Ascn #K-7 7 May 68 0930 EST Double		Ascn #K-1 8 May 68 0600 EST Single		Ascn #K-2 8 May 68 0630 EST Double		Ascn #K-3 8 May 68 0700 EST Double		Ascn #K-4 8 May 68 0730 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---		0.0		0.0		0.0		0.0	Sfc
50	059.4	1.1	067.8	0.5	043.3	1.1	041.0	2.0	036.1	0.8	045.8	0.3	034.0	0.1	080.1	0.1	50
100	053.1	1.9	057.4	1.1	033.8	2.1	042.0	2.3	065.6	1.8	113.5	2.0	118.8	2.0	118.7	1.4	100
150	050.2	2.6	044.2	2.1	034.3	2.1	039.9	1.6	084.9	3.7	134.9	3.8	128.8	3.5	135.2	2.6	150
200	057.8	3.8	042.6	3.0	033.2	2.2	030.1	1.9	138.3	5.6	150.1	5.8	143.7	4.6	149.1	4.0	200
250	060.3	4.8	047.6	3.9	031.8	2.6	026.6	2.0	162.8	9.1	158.2	7.3	157.0	6.0	158.3	5.8	250
300	057.7	6.3	048.8	4.6	031.5	3.1	039.9	1.2	177.0	12.9	164.0	7.8	167.7	7.2	182.0	7.0	300
350	051.5	5.7	047.5	5.1	030.5	2.8	050.3	0.8	166.9	11.4	169.8	8.6	178.0	8.4	182.0	8.1	350
400	050.4	5.0	050.1	4.8	029.1	2.4	018.7	0.7	166.4	10.4	175.0	9.6	188.2	10.4	191.2	8.7	400
450	052.5	4.5	054.6	4.3	026.7	2.2	348.0	0.8	175.3	9.9	185.2	10.5	195.2	10.3	201.4	9.1	450
500	056.2	4.4	058.5	4.2	023.7	2.0	333.4	1.2	188.2	10.3	194.4	10.6	201.6	9.1	200.9	9.4	500
550	061.9	4.4	062.6	4.2	052.9	2.1	326.0	1.6	198.1	9.9	199.6	10.2	200.1	9.0	210.7	8.3	550
600	068.9	4.3	064.0	4.1	074.4	2.8	340.6	1.7	201.4	9.7	202.9	9.6	205.3	8.8	208.8	9.7	600
650	068.1	5.1	064.9	4.0	088.0	3.0	356.7	2.0	198.5	9.7	207.3	8.8	208.1	8.8	211.5	10.0	650
700	067.5	5.9	066.0	4.1	096.1	3.4	008.9	2.3	204.0	8.8	209.5	8.0	211.2	9.0	220.5	9.2	700
750	073.8	4.4	067.9	4.5	093.8	4.2	016.4	1.7	206.9	8.0	216.0	8.5	217.8	9.4	225.3	10.1	750
800	075.3	5.1	072.2	4.8	091.1	4.7	026.3	1.9	212.8	7.9	222.4	8.3	227.0	9.0	227.8	10.2	800
850	077.2	5.9	075.3	5.2	086.4	4.6	036.1	2.0	219.7	8.2	232.2	7.3	232.6	9.1	232.4	10.4	850
900	081.8	6.0	077.3	5.7	084.2	5.1	045.8	2.1	225.0	8.0	237.3	7.4	235.9	9.3	238.7	10.7	900
950	088.0	5.9	086.3	5.0	097.5	3.7	055.3	2.2	230.5	7.6	234.0	8.8	237.9	9.4	245.4	9.8	950
1000	095.1	5.8	098.8	4.9	103.6	3.8	067.5	2.4	237.0	6.4	235.8	8.0	241.8	8.5	251.4	8.3	1000
1050	103.3	4.8	108.3	4.3	112.9	3.1	079.2	2.9	233.0	5.9	239.4	6.1	245.7	7.6			1050
1100	113.1	3.0	117.9	3.1	129.5	2.3	083.6	2.9	216.9	7.0	237.7	5.5	246.3	7.2			1100
1150	100.4	2.5	128.5	1.3	105.3	1.3	082.9	2.9	211.6	6.7	231.3	7.1					1150
1200	079.7	2.7	079.5	1.6	069.3	1.3	077.4	3.3			233.9	6.2					1200
1250	065.6	2.9	058.8	2.2	066.2	2.5	063.8	3.3			228.0	8.2					1250
1300	055.8	3.2	050.7	2.7	062.2	3.4	060.0	3.0									1300
1350	059.3	3.3	048.4	2.9	053.5	3.4	072.0	3.3									1350
1400			045.5	2.8	048.1	3.3	066.5	3.7									1400
1450			044.2	2.7	052.3	4.2	065.6	4.1									1450
1500			045.8	3.0			069.1	4.5									1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-5 8 May 68 0800 EST Double		Ascn #K-6 8 May 68 0830 EST Combined		Ascn #K-7 8 May 68 0900 EST Double		Ascn #K-8 8 May 68 0930 EST Combined		Ascn #K-9 8 May 68 1000 EST Combined		Ascn #K-1 9 May 68 0630 EST Combined		Ascn #K-2 9 May 68 0700 EST Combined		Ascn #K-3 9 May 68 0730 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0	----	---	----	---	----	---		0.0	----	---	----	---	Sfc
50	142.8	0.2	146.2	1.0	152.2	1.9	207.0	3.6	175.2	3.2	194.4	0.8	195.8	1.8	205.0	2.2	50
100	130.0	1.7	157.1	2.8	160.7	3.4	204.2	5.5	176.9	5.1	190.2	2.2	197.1	3.9	205.0	4.5	100
150	146.1	3.5	161.8	4.7	179.4	4.5	201.7	5.2	177.6	6.2	187.5	4.6	198.0	6.3	207.0	6.5	150
200	151.7	4.7	163.7	4.8	187.2	5.5	206.2	4.7	179.4	6.8	189.7	6.9	198.9	8.1	208.0	8.6	200
250	155.8	5.5	163.0	5.4	187.4	5.7	203.5	4.7	177.3	7.2	195.6	9.2	200.8	10.1	210.6	10.9	250
300	162.5	6.3	164.7	5.8	187.5	5.9	202.8	4.7	179.6	6.9	201.8	11.7	204.2	12.4	213.0	13.0	300
350	175.5	7.5	168.0	6.2	186.6	5.8	191.1	4.2	182.2	6.6	208.4	14.3	209.6	13.9	217.9	14.2	350
400	190.5	8.9	181.4	7.0	185.8	5.6	179.2	4.6	188.0	6.3	211.8	16.6	213.1	15.1	220.6	16.2	400
450	197.9	8.9	194.0	7.6	194.7	6.7	169.8	5.2	187.3	6.0	213.8	15.9	218.3	16.8	222.1	18.4	450
500	201.7	8.7	199.7	8.6	189.9	8.2	----	---	187.3	5.5	216.4	14.7	224.3	16.9	223.0	17.7	500
550	204.5	9.1	200.3	10.4	194.5	8.6	----	---	188.2	4.8	220.3	15.9	230.5	17.2	222.9	17.6	550
600	207.0	9.0	207.1	9.1	203.2	8.7	----	---	199.6	4.9	223.5	16.0			222.7	17.7	600
650	211.0	9.6	212.5	9.7	211.0	9.4	183.0	6.0	208.4	5.2	226.3	16.0			226.3	16.2	650
700	216.0	9.2	219.2	11.1	215.6	10.6	192.5	7.5	210.3	5.2	228.0	17.5			227.5	17.7	700
750	222.4	9.4	227.1	12.9	228.0	8.9	199.4	8.9	212.5	6.3					228.0	18.4	750
800	228.7	9.8	229.9	11.8	234.0	8.1	222.1	6.9	213.9	7.0					228.5	17.1	800
850	235.3	10.1	236.5	11.3	237.6	8.1	220.5	8.6	217.0	6.5					228.8	17.9	850
900	242.5	10.1	246.4	9.6	240.9	8.3	223.0	9.0	224.2	6.4							900
950	246.4	9.9	252.5	9.9	249.6	8.0	242.6	6.6	233.9	6.1							950
1000	247.8	9.3	256.5	8.4	257.2	7.8	261.6	6.3	244.8	6.9							1000
1050	254.2	8.1			263.5	7.7	268.2	6.6	252.5	7.6							1050
1100	258.7	7.0			264.5	7.6	265.5	7.0	256.9	7.4							1100
1150	261.9	5.5			264.2	7.5	264.5	6.7	271.8	6.3							1150
1200					263.5	6.2	259.0	6.7	283.6	5.6							1200
1250					260.7	5.4	252.2	7.1	278.2	5.2							1250
1300					256.7	4.9	249.1	7.1									1300
1350					253.8	4.3											1350
1400					247.5	5.6											1400
1450					251.9	5.2											1450
1500					250.2	5.9											1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-4 9 May 68 0830 EST Double D(°)	S(mps)	Ascn #K-1 10 May 68 0700 EST Double D(°)	S(mps)	Ascn #K-2 10 May 68 0730 EST Double D(°)	S(mps)	Ascn #K-3 10 May 68 0800 EST Combined D(°)	S(mps)	Ascn #K-4 10 May 68 0830 EST Combined D(°)	S(mps)	Ascn #K-5 10 May 68 0900 EST Double D(°)	S(mps)	Ascn #K-6 10 May 68 0930 EST Double D(°)	S(mps)	Ascn #K-1 11 May 68 0600 EST Double D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---		0.0	Sfc
50	208.1	2.4	257.8	2.3	278.6	2.3	297.2	3.5	290.1	3.7	305.1	4.0	314.6	3.3	029.4	0.2	50
100	209.7	4.5	261.2	3.8	278.6	4.6	295.2	5.2	296.0	4.6	299.3	5.6	307.4	4.2	092.2	0.9	100
150	212.5	6.1	269.0	4.1	284.0	4.9	292.7	5.8	295.4	4.8	296.0	6.1	298.6	4.4	126.5	2.0	150
200	214.6	7.6	276.2	4.6	289.3	5.2	290.3	5.3	302.8	4.9	295.3	6.0	289.4	4.2	141.5	3.4	200
250	216.0	9.3	283.2	5.4	288.7	5.6	288.5	5.3	302.4	4.2	293.2	5.6	289.3	4.4	174.3	2.4	250
300	216.7	11.4	283.9	5.7	288.2	6.0	288.4	5.6	297.5	4.9	289.1	4.8	291.1	3.8	186.4	4.5	300
350	217.1	13.4	279.6	5.7	287.9	6.5	291.0	6.2	293.7	5.4	284.9	4.3	293.5	4.7	180.2	9.2	350
400	220.1	15.4	277.9	5.7	286.9	7.1	290.8	6.3	290.3	5.5	284.4	4.3	296.6	4.7	184.9	7.7	400
450	223.1	17.5	277.0	5.7	283.9	7.4	289.3	6.4			284.0	4.3	299.3	4.4	192.0	6.6	450
500			278.1	5.1	281.6	7.5	286.3	7.0			288.8	4.8	297.9	6.7	198.7	6.6	500
550			281.4	4.9	280.7	7.1	284.5	7.6			294.2	6.8	300.0	7.0	207.7	6.5	550
600			286.4	5.0	280.1	6.7	285.6	7.6			297.3	8.6	304.0	6.2	215.3	6.5	600
650			291.4	5.2	281.8	6.5	287.5	6.9			303.0	6.3	303.5	7.2	218.9	6.5	650
700			295.1	5.3	283.8	6.2	291.2	5.6			305.2	7.2	303.1	8.0	216.8	6.0	700
750			296.5	5.0	286.5	5.9	294.7	5.4			304.3	8.9	304.8	6.8	211.7	5.3	750
800			290.8	6.0	288.3	5.9	295.3	6.5			304.6	8.6	306.0	8.0	203.0	4.6	800
850			286.5	7.0	289.2	6.1	295.7	6.8			300.7	8.3	305.0	8.8	192.7	4.5	850
900			278.9	6.4	291.1	6.2	295.8	6.4			295.3	7.7	300.7	9.1	183.2	4.2	900
950			271.3	6.5	291.1	6.5	294.2	5.6			292.6	8.5	296.8	9.1	172.7	3.7	950
1000			266.2	7.4	289.0	7.1	288.0	6.7			291.6	9.1	288.7	8.1	168.0	3.4	1000
1050					283.7	6.9	284.8	8.3			272.8	4.0	274.2	6.6	171.9	3.4	1050
1100					276.6	6.1					276.9	5.9	277.7	6.9	173.7	3.1	1100
1150					272.7	7.3					269.4	6.3	285.1	6.9	172.2	2.2	1150
1200					270.1	8.8					266.3	7.1			169.5	1.4	1200
1250					268.0	10.5					270.2	8.8			182.4	1.8	1250
1300					265.5	10.7					269.2	8.7			188.4	1.3	1300
1350															196.6	1.6	1350
1400															202.0	2.1	1400

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 11 May 68 0630 EST Combined		Ascn #K-3 11 May 68 0700 EST Double		Ascn #K-4 11 May 68 0730 EST Double		Ascn #K-5 11 May 68 0800 EST Double		Ascn #K-1 21 May 68 0630 EST Double		Ascn #K-2 21 May 68 0700 EST Double		Ascn #K-3 21 May 68 0730 EST Double		Ascn #K-1 23 May 68 0630 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0	----	---	----	---	----	---		0.0	Sfc
50	084.2	0.3	038.1	0.4	076.5	0.5	075.7	0.7	254.9	2.3	275.7	2.5	278.6	4.1		0.0	50
100	104.5	0.9	082.0	0.7	085.8	1.3	075.9	1.4	264.8	4.0	273.8	4.5	273.1	4.9	127.9	0.5	100
150	114.3	1.9	131.5	1.8	116.1	1.9	092.0	2.0	276.3	5.1	267.6	5.1	270.3	5.2	142.6	1.9	150
200	156.0	3.2	151.6	3.4	142.5	2.5	119.0	2.5	273.7	6.2	266.1	5.0	269.8	5.3	168.6	3.6	200
250	171.3	4.4	168.8	4.2	162.5	2.3	150.3	3.0	266.4	6.1	267.8	5.4	272.7	5.4	187.2	5.6	250
300	182.4	5.1	180.2	4.4	189.1	3.0	165.6	2.8	262.5	6.4	262.4	5.0			191.5	6.2	300
350	187.5	5.9	193.4	4.7	206.7	3.2	186.5	2.6							193.1	6.3	350
400	192.9	5.9	209.0	5.5	218.7	2.9	195.7	1.8							189.5	6.3	400
450	198.7	6.0	211.7	5.9	218.3	2.5	188.5	1.8							187.0	6.2	450
500	205.7	6.2	217.5	5.4	205.8	2.6	174.5	2.4							185.2	6.4	500
550			224.3	4.7	188.0	3.4	172.7	3.3							182.9	6.8	550
600			226.7	4.3	184.4	4.2	169.9	4.2							183.5	7.1	600
650			218.3	4.2	174.0	4.6	158.6	5.2							183.6	7.7	650
700			203.0	4.0	163.1	4.9	146.4	5.7							183.8	8.0	700
750			191.4	4.5	156.8	5.0	143.2	5.6							183.8	8.2	750
800			183.0	4.6	153.5	5.0	137.7	5.7							183.2	8.3	800
850			175.0	4.5	148.3	4.4	131.9	5.9							183.1	8.7	850
900			170.0	4.3	146.6	4.5	131.3	5.5							181.6	7.7	900
950			167.6	4.1	141.9	4.8	132.3	5.8							179.4	8.0	950
1000			159.2	4.0	134.4	4.4	129.3	5.2							177.7	8.4	1000
1050			148.0	3.8	128.1	3.9	124.0	5.2							177.5	8.8	1050
1100			146.1	3.9	126.7	3.7	121.0	5.6							177.2	9.1	1100
1150			134.9	3.2	122.8	3.5	120.1	5.9							174.2	8.8	1150
1200			145.8	3.7	124.6	3.7	120.4	5.6							174.7	9.3	1200
1250			152.3	4.2	124.6	4.0	124.3	6.4									1250

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-2 23 May 68 0700 EST Double D(°)	S(mps)	Ascn #K-1 25 May 68 0730 EST Double D(°)	S(mps)	Ascn #K-2 25 May 68 0800 EST Double D(°)	S(mps)	Ascn #K-3 25 May 68 0830 EST Double D(°)	S(mps)	Ascn #K-3A 25 May 68 0830 EST Single D(°)	S(mps)	Ascn #K-4 25 May 68 0900 EST Double D(°)	S(mps)	Ascn #K-5 25 May 68 0930 EST Single D(°)	S(mps)	Ascn #K-6 25 May 68 1000 EST Double D(°)	S(mps)	Z(m)
Sfc	----	---		0.0		0.0		0.0	----	---		0.0	----	---	----	---	Sfc
50	091.8	1.5	178.5	0.1	197.0	0.3	053.0	1.0	----	---	046.5	0.6	----	---	081.1	1.8	50
100	088.4	1.9	045.1	0.6	037.3	0.5	051.6	1.9	052.8	0.8	054.1	1.2	042.2	1.4	081.1	3.6	100
150	094.2	1.6	056.3	2.6	053.2	1.8	048.1	2.3	052.8	2.6	067.2	1.7	042.2	4.6	084.2	4.0	150
200	153.4	2.5	063.1	4.6	065.2	3.6	056.8	3.1	067.5	3.4	074.1	3.1	056.6	4.3	088.6	3.8	200
250	168.1	4.0	069.3	6.6	070.5	6.2	068.7	4.5	071.3	5.0	076.7	4.8	085.6	4.2	093.1	1.7	250
300	171.8	4.8	072.3	8.6	072.1	7.3	067.8	6.4	069.9	7.2	071.9	6.1	117.8	5.5	093.2	2.1	300
350	174.7	5.4	074.0	8.1	074.5	7.7	067.3	8.4	073.1	10.6	069.6	6.7	111.6	5.3	093.4	2.4	350
400	179.1	5.7	075.8	8.2	077.9	7.6	067.6	10.6	071.0	8.2	068.7	6.6	104.1	5.0	093.6	2.8	400
450	178.3	6.3	077.2	8.2	080.8	7.5	067.8	12.7	063.3	3.9	073.1	7.4	096.1	4.8	093.6	3.1	450
500	173.2	6.6	073.8	8.3	080.5	7.4			077.8	7.0	078.2	8.5	091.5	4.7	093.8	3.5	500
550	170.9	7.1	081.1	8.0	081.1	7.3			081.9	7.5	084.0	7.9	088.1	4.9	091.4	3.7	550
600	169.8	7.6	083.4	8.0	084.1	7.5			085.6	7.3	085.9	8.0	087.8	5.1	082.9	3.8	600
650	169.4	8.0	085.0	8.1	086.4	7.6			089.4	7.1	088.6	7.8	089.7	5.2	075.2	4.0	650
700	170.3	7.9	086.7	8.2	087.6	7.7			090.7	7.4	092.5	7.2	090.2	5.3	074.8	4.5	700
750	170.8	8.2	088.2	8.1	087.2	8.0			089.8	7.2	093.0	7.3	089.1	5.3	078.1	3.8	750
800	170.4	8.5	090.1	7.7	090.2	7.4			089.7	7.1	093.1	7.1	089.6	5.4	081.0	3.5	800
850	169.8	8.8	088.7	8.0	090.0	7.3			090.5	7.1	092.8	7.1	091.3	5.6	089.4	5.0	850
900			086.4	7.7	088.6	7.6			091.5	7.1	091.8	7.4	092.8	5.7	092.5	5.6	900
950			083.5	8.0	089.4	7.7			091.8	7.0	092.4	7.1	091.6	6.0	088.8	5.0	950
1000			083.7	7.7	093.3	6.9			093.2	6.9	091.9	7.0	091.1	5.5	084.5	4.8	1000
1050			086.1	6.5	092.5	6.5			094.7	7.0	091.6	7.7	092.3	4.8	078.5	3.7	1050
1100					090.9	7.3			095.0	7.1	094.2	6.1	095.6	4.0	080.2	4.1	1100
1150					089.2	7.8			094.2	7.5	089.2	8.0	095.0	3.5	087.8	4.0	1150
1200					087.2	7.8			094.5	7.5	090.0	7.3	057.6	2.6	093.8	3.8	1200
1250					089.4	7.7			093.1	7.5	109.2	3.5			095.8	3.8	1250
1300					091.6	6.8			091.6	7.1					087.2	3.1	1300
1350									095.0	5.3					077.7	3.2	1350
1400															072.9	3.7	1400
1450															073.4	4.6	1450
1500															074.9	4.8	1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-7 25 May 68 1030 EST Double		Ascn #K-8 25 May 68 1200 EST Double		Ascn #K-1 26 May 68 0600 EST Double		Ascn #K-2 26 May 68 0630 EST Double		Ascn #K-3 26 May 68 0700 EST Double		Ascn #K-4 26 May 68 0730 EST Double		Ascn #K-5 26 May 68 0800 EST Double		Ascn #K-6 26 May 68 0830 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---		0.0		0.0	----	---	----	---	----	---	----	---	Sfc
50	074.6	2.4	042.2	2.1	054.6	0.6	076.8	0.9	084.7	1.6	071.1	1.7	070.2	1.4	081.7	3.7	50
100	086.5	4.2	046.7	2.6	064.8	1.5	076.8	1.8	084.8	3.1	071.1	3.3	072.9	2.6	083.6	4.4	100
150	091.2	4.6	072.5	1.3	071.2	2.7	089.7	2.9	090.6	3.9	087.6	4.1	089.6	2.6	086.1	4.8	150
200	096.5	4.7	080.3	1.0	082.8	4.0	096.6	4.0	094.4	4.8	098.8	5.2	103.9	2.9	092.3	4.8	200
250	098.2	4.6	089.8	1.0	090.3	5.4	140.1	5.0	104.8	5.4	113.3	6.0	111.5	3.0	098.4	4.9	250
300	089.5	4.5	097.8	1.1	128.0	7.4	142.7	6.0	121.6	6.2	124.5	7.1	118.3	3.2	111.8	5.1	300
350	082.9	4.6	081.6	0.8	140.1	8.3	145.1	7.0	134.3	7.2	137.0	7.2	127.4	5.3	123.4	5.6	350
400	082.7	4.8	067.4	0.9	145.9	7.8	147.3	8.0	146.2	7.6	145.8	7.7	131.3	8.0	129.0	6.7	400
450	082.3	4.8	063.8	1.1	150.3	8.0	149.8	8.2	151.7	8.4	149.6	8.4	142.7	8.5	130.5	8.1	450
500	081.1	4.4	066.1	1.4	156.7	8.7	150.0	9.1	151.9	8.7	152.7	8.9	151.0	9.4			500
550	072.9	4.9	072.5	1.5	159.4	9.6	150.6	10.0	154.3	9.1	155.8	9.8	153.4	10.5			550
600	077.7	4.8	079.8	1.8	160.4	10.5	151.0	10.9	159.3	9.9	158.5	11.1	157.1	11.0			600
650	084.1	4.8	085.4	2.4	160.7	11.3	151.6	11.9	159.9	10.6	160.6	12.3	160.3	12.0			650
700	085.4	4.7	093.2	2.7	159.8	12.4	156.1	11.6	160.8	11.2	161.5	12.4	161.8	13.1			700
750	088.1	4.5	092.5	2.8	158.2	13.3	164.5	12.2	161.2	12.4	161.6	14.8	162.2	14.1			750
800	090.0	4.6	088.7	2.5	157.8	14.3	162.3	13.9	160.9	13.9	162.6	12.7	164.8	14.4			800
850	089.3	4.8	083.9	2.1	157.4	14.0	159.2	13.8	161.0	14.7	162.9	14.9	170.1	13.2			850
900	088.9	5.1	084.5	1.8	157.7	12.5	157.4	13.0	160.9	14.9			174.3	13.5			900
950	087.9	5.2	092.6	2.1	160.7	13.0	157.7	12.3	164.4	12.4			180.8	12.3			950
1000	085.9	5.4	092.1	1.7	163.5	11.9	161.0	12.8	170.5	10.7			186.7	11.2			1000
1050	083.3	5.7	080.0	1.3	167.0	10.4	166.3	11.7	174.8	11.6			190.0	10.3			1050
1100	082.8	5.3	061.0	1.4	169.0	12.1	173.5	9.8	193.7	6.0							1100
1150	083.3	5.0	063.2	2.2	171.6	12.5	181.2	6.2	196.5	7.3							1150
1200	084.9	4.9	065.9	2.8	184.4	7.2	183.6	6.5	192.7	9.1							1200
1250	083.9	4.6	068.2	3.1	182.1	8.5	186.0	6.8	191.2	9.7							1250
1300							184.8	8.4	193.0	8.6							1300
1350							182.3	10.7	186.7	10.5							1350
1400							184.2	9.5									1400
1450							197.0	4.4									1450
1500							181.0	6.8									1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-7 26 May 68 0900 EST Double D(°)	S(mps)	Ascn #K-8 26 May 68 0930 EST Double D(°)	S(mps)	Ascn #K-9 26 May 68 1000 EST Double D(°)	S(mps)	Ascn #K-10 26 May 68 1030 EST Double D(°)	S(mps)	Ascn #K-1 27 May 68 0640 EST Double D(°)	S(mps)	Ascn #K-2 27 May 68 0730 EST Double D(°)	S(mps)	Ascn #K-3 27 May 68 0800 EST Double D(°)	S(mps)	Ascn #K-4 27 May 68 0830 EST Double D(°)	S(mps)	Z(m)
Sfc		0.0	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	108.7	0.9	126.4	2.3	087.6	2.0	126.2	2.7	089.5	2.8	097.1	3.1	101.3	3.2	100.5	2.1	50
100	108.7	1.7	123.3	3.8	087.6	3.9	130.2	4.5	089.5	5.7	097.1	6.3	101.3	6.5	100.5	4.3	100
150	108.7	2.6	114.3	3.7	088.3	2.2	134.9	5.3	106.6	6.3	103.0	8.8	105.3	6.5	097.6	5.8	150
200	108.7	3.4	104.9	3.7	089.4	3.0	134.3	5.4	119.1	7.5	107.2	11.4	104.4	8.0	094.6	7.0	200
250	108.7	4.3	106.3	3.7	090.0	3.7	133.9	5.5	117.4	10.9	103.4	12.3	101.2	11.0	099.9	8.3	250
300	109.6	4.5	109.4	3.8	090.4	4.5	134.1	5.3	107.6	11.0	098.5	13.1	100.3	13.6	111.4	10.2	300
350	110.3	4.8	112.1	3.7	093.6	3.5	134.5	5.1	098.6	12.7	099.3	14.5	101.7	15.0	113.5	11.0	350
400	110.2	4.7	112.6	4.4	100.0	4.0	127.8	4.9	100.6	14.5	102.4	16.2	102.9	16.5	113.4	11.4	400
450	109.2	4.2	110.4	6.1	105.8	4.5	124.1	4.7	103.2	16.4	103.4	16.5			112.4	11.9	450
500	112.7	4.2	111.1	7.1	112.0	5.0	130.4	4.4	105.3	18.2	105.2	17.5			110.3	12.3	500
550	118.2	4.4	120.5	5.6	118.2	5.5	137.8	4.2	107.6	20.0	109.5	21.1			108.4	12.7	550
600	123.9	4.8	129.7	5.4	124.6	6.0	140.3	4.6	109.8	21.9	113.2	19.6			115.2	14.3	600
650	128.9	5.2	135.0	5.8	131.1	6.5	135.0	5.8	114.3	24.0	114.2	21.2			121.3	16.2	650
700	132.1	5.6	135.2	6.6	133.4	7.0	136.8	5.5	119.1	19.9	114.2	24.2			121.6	16.2	700
750	134.6	6.0	136.0	7.2	131.1	7.3	143.4	5.6			119.1	24.7					750
800	138.6	7.1	142.5	6.9	130.0	7.0	147.2	6.1			130.0	21.5					800
850	141.7	8.4	148.5	7.3	138.5	6.2	149.6	5.9									850
900			153.6	7.5	144.9	6.0	152.2	5.3									900
950			159.6	8.1	149.4	6.6	155.2	5.2									950
1000			171.2	8.3	166.1	6.7	156.7	5.7									1000
1050			178.3	9.0	178.7	7.6	160.3	6.0									1050
1100			190.2	5.6	182.7	6.1	164.4	6.1									1100
1150			191.1	5.7	185.1	4.1	168.6	6.2									1150
1200			192.0	6.2	194.9	3.4	170.8	5.6									1200
1250			194.6	6.6	205.7	3.7											1250
1300			194.5	6.4	204.5	4.5											1300
1350					204.8	4.9											1350
1400					206.5	4.8											1400
1450					198.3	5.4											1450
1500					193.6	5.9											1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-5 27 May 68 0900 EST Combined		Ascn #K-6 27 May 68 1000 EST Double		Ascn #K-1 28 May 68 0600 EST Double		Ascn #K-2 28 May 68 0700 EST Double		Ascn #K-3 28 May 68 0730 EST Double		Ascn #K-4 28 May 68 0800 EST Double		Ascn #K-5 28 May 68 0830 EST Double		Ascn #K-6 28 May 68 0900 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---		0.0	----	---	----	---	----	---	----	---	----	---	Sfc
50	112.7	2.9	109.3	2.9	119.9	1.0	087.4	2.4	092.1	1.9	076.0	1.7	098.8	2.1	091.5	3.6	50
100	112.7	5.8	109.3	5.8	119.8	2.1	086.9	4.5	092.1	3.8	076.0	3.4	098.9	1.4	090.8	5.9	100
150	109.9	6.6	108.9	4.1	117.0	3.5	084.4	4.7	094.4	4.9	081.4	4.5	099.7	2.1	089.1	6.4	150
200	107.2	7.2	108.5	5.5	116.4	4.7	084.0	4.9	097.7	5.4	087.6	5.4	100.1	2.9	089.4	6.2	200
250	109.9	8.5	108.2	6.9	116.7	5.7	102.5	5.3	100.3	6.1	092.0	6.4	100.6	3.6	090.1	6.0	250
300	114.2	10.4	107.8	8.3	122.1	6.7	111.9	5.9	101.4	7.1	107.8	6.9	101.0	4.2	090.8	5.7	300
350	112.8	11.6	107.6	9.6	100.9	8.7	114.4	6.3	102.4	8.1	110.5	7.4	101.2	5.0	099.0	5.1	350
400	111.7	12.7	109.1	11.6	130.7	9.8			110.9	8.6	110.6	6.8	104.2	5.8	109.9	4.7	400
450	111.0	13.7	110.8	13.2					119.4	9.3			108.9	6.7			450
500	110.3	14.6	113.7	13.8									111.9	7.4			500
550	113.8	15.2	115.5	14.3									114.0	8.0			550
600	117.5	15.8	112.6	14.8													600
650	119.8	16.3	109.9	15.3													650
700	121.3	16.7															700

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-7 28 May 68 0930 EST Double		Ascn #K-8 28 May 68 1000 EST Double		Ascn #K-9 28 May 68 1030 EST Double		Ascn #K-1 29 May 68 0800 EST Double		Ascn #K-2 29 May 68 0830 EST Double		Ascn #K-3 29 May 68 0900 EST Double		Ascn #K-3A 29 May 68 0900 EST Single		Ascn #K-4 29 May 68 0930 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---		0.0	----	---		0.0		0.0	----	---	Sfc
50	079.6	2.0	092.9	2.4	075.2	2.4	137.6	0.1	239.9	1.6	222.2	0.4	----	---	219.0	3.0	50
100	081.6	3.7	090.7	3.4	075.2	4.9	153.1	1.0	233.2	2.6	221.6	0.8	250.6	0.3	215.1	2.2	100
150	087.2	4.6	086.8	3.4	082.6	4.8	180.4	2.3	220.6	3.2	220.5	1.1	250.6	0.9	215.1	3.3	150
200	095.6	5.2	091.3	3.9	091.1	4.6	193.2	3.9	211.9	4.2	211.6	2.1	217.0	2.0	217.5	4.5	200
250	110.4	5.5	095.0	4.5	097.4	4.8	204.7	4.0	214.0	4.6	210.5	2.9	221.3	2.5	220.4	4.6	250
300	112.8	6.5			100.1	5.3	203.4	3.5	217.5	4.3	220.2	2.6	243.2	2.6	216.4	4.2	300
350	109.5	7.7			102.3	5.7	203.3	3.0	215.9	3.8	230.7	1.7	245.4	2.0	215.4	4.1	350
400	106.0	8.7			096.9	7.1	205.4	2.5	211.5	3.2	257.2	2.3	256.8	2.2	213.2	3.9	400
450					092.5	8.7	230.1	1.3	215.1	2.7	267.0	3.4	266.8	3.0	213.1	4.0	450
500							247.2	2.8	242.8	3.1	267.2	4.7	271.0	4.2	214.4	4.2	500
550							244.1	5.0	257.4	4.0			266.3	5.1			550
600							263.2	5.3	264.1	5.2			263.6	5.6			600
650							270.1	6.1	268.1	6.4			263.5	5.6			650
700									269.1	7.1			263.6	6.4			700
750													262.0	6.9			750
800													261.5	7.3			800
850													260.8	7.4			850
900													257.9	7.1			900
950													254.8	7.0			950
1000													255.0	7.7			1000
1050													256.4	8.3			1050
1100													257.5	8.3			1100
1150													256.9	8.1			1150
1200													256.4	7.9			1200
1250													255.1	8.0			1250
1300													253.5	8.2			1300
1350													252.7	8.1			1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-5 29 May 68 1000 EST Double D(°)	S(mps)	Ascn #K-6 29 May 68 1030 EST Combined D(°)	S(mps)	Ascn #K-7 29 May 68 1100 EST Double D(°)	S(mps)	Ascn #K-8 29 May 68 1130 EST Double D(°)	S(mps)	Ascn #K-9 29 May 68 1200 EST Double D(°)	S(mps)	Ascn #K-1 30 May 68 0730 EST Single D(°)	S(mps)	Ascn #K-2 30 May 68 0800 EST Single D(°)	S(mps)	Ascn #K-1 31 May 68 0630 EST Double D(°)	S(mps)	Z(m)
Sfc		0.0		0.0	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	131.8	0.2	198.7	1.1	197.2	1.5	202.5	2.6	214.7	1.9	----	---	----	---	261.0	3.3	50
100	131.8	0.4	201.0	1.9	197.2	2.7	197.2	3.7	243.6	1.9	----	---	----	---	262.1	5.8	100
150	165.2	0.7	203.6	2.6	197.5	2.2	193.0	4.2	233.0	2.5	285.0	0.2	351.6	0.7	267.5	5.5	150
200	176.8	1.3	205.2	1.6	210.1	2.0	189.9	4.2	225.3	2.1	242.9	1.0	329.2	1.3	268.1	5.8	200
250	182.3	2.0	207.3	2.0	229.6	2.1	186.9	4.2	230.1	2.5	233.5	2.7	299.2	1.9	268.7	6.4	250
300	194.3	2.5	208.8	2.4	227.1	2.5			225.3	2.5	237.9	3.0	300.2	1.4	270.9	7.8	300
350	224.6	2.8	209.7	2.7	211.5	3.2			226.4	3.3	239.0	3.1	303.8	0.8			350
400	228.5	2.8	242.3	2.1	195.1	3.2					236.7	3.0	315.2	0.3			400
450			247.0	2.3	199.6	3.5					228.5	2.4	255.5	0.4			450
500			235.9	2.7	210.3	4.1					220.0	2.2	234.5	0.8			500
550			219.7	3.3	208.9	4.4					214.9	2.4	229.9	1.3			550
600			220.8	4.4	211.9	4.0					216.9	3.1	238.4	1.5			600
650			236.6	5.0	212.6	3.9					214.7	3.7	223.3	1.4			650
700			236.7	5.5	210.1	3.9					210.2	3.8	203.1	1.2			700
750			232.1	6.1	213.6	4.7					202.6	3.5	182.3	1.2			750
800			234.8	6.8	224.8	5.9					198.4	3.9	164.5	1.4			800
850					235.2	4.9					193.7	3.6	147.7	1.7			850
900											195.1	3.7	148.3	1.7			900
950											196.8	3.8	163.4	1.6			950
1000											186.0	3.4	185.0	1.5			1000
1050											192.9	3.0	221.8	1.6			1050
1100											205.8	3.1	235.3	2.4			1100
1150											217.1	3.4	236.3	3.0			1150
1200											224.0	3.6	233.9	3.0			1200
1250											224.5	3.2	231.4	3.1			1250
1300											221.8	4.6	231.5	3.1			1300
1350											226.6	3.6	233.1	3.0			1350
1400											244.9	2.0	232.1	2.9			1400
1450											233.0	3.6	222.2	3.2			1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-2 31 May 68 0700 EST Double D(°)	S(mps)	Ascn #K-3 31 May 68 0730 EST Combined D(°)	S(mps)	Ascn #K-4 31 May 68 0800 EST Double D(°)	S(mps)	Ascn #K-5 31 May 68 0830 EST Double D(°)	S(mps)	Ascn #K-6 31 May 68 0900 EST Single D(°)	S(mps)	Ascn #K-1 1 Jun 68 0850 EST Single D(°)	S(mps)	Ascn #K-2 1 Jun 68 0930 EST Single D(°)	S(mps)	Ascn #K-3 1 Jun 68 1000 EST Single D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	245.9	2.2	242.3	2.2	253.3	2.8	251.1	4.9	----	---	----	---	----	---	----	---	50
100	248.6	4.0	243.3	4.2	252.5	5.1	250.4	6.1	----	---	----	---	----	---	----	---	100
150	255.4	4.7	244.3	6.1	248.6	5.3	249.4	6.1	235.7	1.5	----	---	----	---	----	---	150
200	258.8	5.6	251.4	5.6	245.5	5.5	247.4	6.5	240.4	4.9	211.6	2.2	214.9	1.2	169.0	1.1	200
250	258.9	7.0	257.9	5.3	254.4	6.4	245.4	6.9	255.8	6.6	209.9	3.7	211.9	2.0	169.0	1.9	250
300	259.0	7.9	262.3	5.3					260.3	6.1	207.0	4.4	207.4	2.5	169.0	2.3	300
350			268.1	6.8					249.2	3.2	205.0	4.8	207.5	3.3	174.4	2.6	350
400			271.9	8.9					267.1	4.3	205.3	4.7	209.6	3.6	181.8	2.6	400
450			276.4	10.4					279.2	6.3	208.4	4.0	213.7	3.6	194.3	2.3	450
500			278.9	11.5							214.0	3.4	217.3	3.5	214.9	2.5	500
550			278.9	11.8							221.3	3.3	226.4	3.4	225.9	3.0	550
600											230.8	3.3	240.7	3.4	228.3	3.4	600
650											255.0	3.0	256.8	3.9	216.1	2.9	650
700											275.5	3.8	258.5	5.0	240.2	2.9	700
750											276.3	5.1	263.0	5.8	260.7	3.8	750
800											271.6	6.4	271.1	6.0	269.6	4.8	800
850											292.1	6.0	270.9	6.0	276.4	5.0	850
900											288.4	7.0	276.0	6.7	281.0	5.7	900
950											285.7	7.7	281.6	7.2	281.7	6.1	950
1000											288.2	7.8	285.4	7.4	280.9	6.5	1000
1050											297.0	7.9	283.8	8.0	281.7	7.9	1050
1100											297.4	8.3	281.6	8.2	281.9	8.2	1100
1150											296.3	8.7	280.8	8.8	284.8	8.6	1150
1200											295.3	8.9	282.8	9.5	287.9	8.9	1200
1250											294.8	8.9	288.3	10.0	290.0	8.9	1250
1300											294.8	9.4	298.7	10.1	291.6	8.6	1300
1350											296.7	9.1	290.7	9.0	293.5	7.9	1350
1400											298.9	9.3	290.1	8.8	295.7	7.6	1400
1450											301.2	9.6	296.6	9.1			1450
											304.3	9.3	297.1	8.9			

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-4 1 Jun 68 1030 EST Single		Ascn #K-1 29 Jun 68 0600 EST Single		Ascn #K-2 29 Jun 68 0630 EST Double		Ascn #K-3 29 Jun 68 0700 EST Double		Ascn #K-4 29 Jun 68 0730 EST Single		Ascn #K-5 29 Jun 68 0800 EST Double		Ascn #K-6 29 Jun 68 0830 EST Single		Ascn #K-7 29 Jun 68 0900 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	----	---	200.6	1.8	197.8	3.1	199.1	2.4	174.6	2.2	215.8	1.8	197.6	2.0	198.7	2.0	50
100	----	---	200.5	3.6	203.5	3.7	198.4	4.3	185.9	3.5	216.7	3.1	198.8	3.7	198.7	3.9	100
150	218.0	0.9	200.5	5.5	216.8	4.6	200.2	6.2	204.4	4.3	218.1	3.9	209.5	3.4	204.3	6.3	150
200	213.8	1.7	203.7	6.5	238.2	5.3	202.5	8.4	221.8	4.3	214.4	5.5	216.6	3.9	206.3	7.5	200
250	208.6	2.4	208.0	7.9	239.5	8.7	201.6	10.8	220.7	6.6	210.9	7.5	214.7	5.7	206.4	7.4	250
300	222.4	2.9	212.4	9.8	238.2	12.0	209.8	10.2	212.9	11.1	210.3	9.2	218.1	8.2	204.1	8.5	300
350	233.4	3.1	219.1	11.9	238.9	14.1	214.6	12.0	215.6	14.2	212.8	10.5	219.1	9.4	206.7	9.4	350
400	243.6	3.2	220.1	13.5	241.4	14.5	216.6	14.7	220.7	15.9	217.3	11.8	217.8	10.6	215.8	9.9	400
450	234.3	4.1	220.7	14.2	243.8	14.4	220.8	16.7	227.0	16.6	222.9	13.4	219.8	13.9	223.0	10.5	450
500	234.6	4.4	230.7	13.5	245.8	14.2	229.0	16.2	232.2	17.1	225.0	16.3	224.4	13.8	226.4	11.3	500
550	239.4	4.3	238.1	16.0	248.0	14.2	233.1	18.2	238.7	17.3			229.3	14.5	226.7	12.1	550
600	243.0	4.2	243.5	18.0	247.2	15.8	235.3	20.4	245.3	17.4					227.5	11.5	600
650	249.0	4.1	248.8	18.6	248.9	15.2	241.4	17.9	251.7	17.2					228.2	12.3	650
700	257.0	4.5	253.0	19.3			248.2	17.6	257.6	16.3					228.5	13.5	700
750	263.9	5.4	255.0	19.2					260.0	16.3					234.8	13.8	750
800	267.3	6.3	253.6	19.0					261.0	16.4							800
850	277.5	6.3	253.8	18.7					261.1	16.1							850
900	283.1	6.2	264.1	18.5					260.0	14.7							900
950	284.3	6.1	259.3	18.5					260.0	16.3							950
1000	285.8	6.2	258.7	19.1					259.9	17.0							1000
1050	288.9	5.6	260.1	20.1					259.5	17.4							1050
1100	282.5	5.4	262.0	20.6													1100
1150	283.6	5.7	265.8	17.4													1150
1200	295.1	6.6															1200
1250	289.8	6.1															1250
1300	290.7	6.0															1300
1350	294.1	5.6															1350
1400	297.6	5.2															1400
1450	297.2	5.5															1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-8 29 Jun 68 0930 EST Single		Ascn #K-1 30 Jun 68 0640 EST Combined		Ascn #K-2 30 Jun 68 0700 EST Combined		Ascn #K-3 30 Jun 68 0730 EST Double		Ascn #K-4 30 Jun 68 0800 EST Double		Ascn #K-5 30 Jun 68 0830 EST Combined		Ascn #K-6 30 Jun 68 0903 EST Combined		Ascn #K-7 30 Jun 68 0930 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---		0.0		0.0	----	---	----	---	----	---	----	---	----	---	Sfc
50	185.7	1.8	192.0	1.4	178.9	1.1	199.6	2.0	190.6	2.7	234.4	3.5	249.2	3.5	274.7	2.5	50
100	196.4	3.1	198.1	2.5	187.0	2.3	200.8	2.9	200.1	3.4	234.4	6.6	248.4	5.4	276.0	4.7	100
150	212.2	4.0	210.4	3.6	202.1	3.4	206.5	3.2	217.5	3.2	234.6	6.1	248.8	6.1	278.7	6.4	150
200	215.1	3.0	224.5	5.1	217.9	4.1	221.8	3.6	228.8	3.7	251.6	6.9	256.4	6.3	271.5	6.9	200
250	215.3	2.9	241.4	7.3	235.9	5.3	237.3	5.9	243.3	4.2	245.7	8.0	267.0	6.5	263.0	7.3	250
300	212.6	3.8	248.4	9.1	244.7	7.0	245.1	7.5	253.7	4.7	242.2	8.4	269.3	7.2	259.7	6.7	300
350	211.6	3.9	250.9	10.6	249.5	8.8	250.1	8.8	251.0	5.3	247.2	10.9	270.9	8.0	255.8	6.1	350
400	217.2	4.6	254.2	11.9	254.4	10.6	250.7	10.2	249.9	6.5	250.4	13.1	267.1	7.9	255.9	6.8	400
450	225.8	5.8	258.5	12.7	259.6	12.1	256.0	12.6	249.5	7.9	255.5	11.5	262.3	7.7	256.4	7.7	450
500	235.0	7.8	261.5	13.3	263.0	13.2	260.4	14.8	254.3	8.8	255.4	12.1	258.8	8.1	257.0	8.5	500
550	236.8	9.8	262.9	15.5	264.8	15.8	267.9	14.7	258.1	10.2	253.9	13.3	256.2	8.8	258.5	9.4	550
600	240.1	11.8	265.8	16.2	266.5	17.6			259.4	13.5	258.0	12.8	253.9	9.4	259.7	10.3	600
650	245.6	13.7	266.1	18.3	268.6	18.8					260.9	14.5	262.6	11.4	261.3	12.3	650
700	254.1	14.6			270.9	19.6					262.5	19.3	267.4	13.8	262.4	14.4	700
750	258.3	14.1			270.1	21.6					265.3	23.9	269.9	16.5	268.8	15.2	750
800	261.0	14.2			270.1	22.6					270.8	21.4	272.5	17.8	274.7	16.2	800
850	261.0	14.2			273.4	18.9					272.0	21.7	277.8	15.3	276.8	17.4	850
900	256.3	12.1			279.1	19.5					274.3	22.0	276.9	19.4	278.5	18.7	900
950	259.9	12.5			275.4	19.5					275.2	22.8	277.4	22.0	278.8	18.8	950
1000	259.9	12.0			267.0	19.7					273.7	24.2	278.3	23.9	279.0	18.7	1000
1050	256.9	11.3			268.4	22.6					272.8	25.9	278.5	24.6	279.8	19.4	1050
1100	251.8	11.0			268.2	24.6					281.9	29.1	278.5	25.3	280.5	20.1	1100
1150	250.2	11.3											278.2	26.1	281.2	21.6	1150
1200	248.3	11.7											278.4	26.5	281.7	23.1	1200
1250	246.8	12.1											278.7	26.7	281.4	24.3	1250
1300	246.0	12.5											280.7	27.5	281.1	25.4	1300
1350	245.9	12.9													280.6	27.3	1350
1400	245.7	12.2													280.1	29.3	1400
1450	245.6	13.1															1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 1 Jul 68 0600 EST Combined		Ascn #K-2 1 Jul 68 0630 EST Combined		Ascn #K-3 1 Jul 68 0700 EST Combined		Ascn #K-4 1 Jul 68 0730 EST Double		Ascn #K-5 1 Jul 68 0800 EST Combined		Ascn #K-6 1 Jul 68 0830 EST Double		Ascn #K-7 1 Jul 68 0900 EST Combined		Ascn #K-8 1 Jul 68 0930 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---		0.0	----	---	----	---	----	---		0.0	----	---	----	---	Sfc
50	190.4	1.6	222.4	1.2	207.0	1.8	202.6	2.5	204.1	2.8	226.7	1.4	247.9	2.1	176.8	4.6	50
100	196.3	3.2	217.4	2.7	209.2	3.5	205.0	4.4	210.6	4.4	226.7	2.7	247.9	4.3	186.4	4.8	100
150	204.3	4.7	208.6	4.9	215.4	4.8	213.8	4.5	219.8	5.4	228.8	3.4	244.5	4.4	275.6	2.5	150
200	211.9	6.3	216.0	6.7	223.4	6.4	222.1	5.2	230.7	6.6	230.3	4.0	241.3	4.6	299.8	3.0	200
250	225.2	8.1	226.3	8.4	230.7	8.2	227.9	6.5	232.7	6.9	231.4	4.6	242.4	4.7	300.2	2.7	250
300	237.6	9.9	242.1	10.0	238.4	9.3	235.2	7.6	237.7	7.0	232.2	5.2	248.3	4.8	270.2	2.0	300
350	247.8	11.1	250.9	11.3	246.2	11.5	242.3	8.9	248.7	6.9	242.9	7.0	245.4	6.2	254.4	3.4	350
400	257.9	12.4	258.6	12.7	252.3	13.5			254.6	8.5	250.3	8.3	246.1	7.2	246.6	4.0	400
450	263.2	14.0	264.6	14.4	262.0	13.6			256.7	10.9	252.4	8.3	255.3	6.9			450
500	266.4	15.2	267.7	16.3	266.0	15.3			262.5	11.1	251.5	8.6	262.3	6.7			500
550	268.8	15.8	269.9	16.2	268.4	16.3			269.0	12.8	256.7	9.1	268.4	6.8			550
600			271.1	15.0	271.2	15.5			270.4	14.4			271.2	7.2			600
650			270.9	14.6	269.5	16.9			269.5	15.6			273.2	7.6			650
700			270.3	16.3	269.1	17.1			268.4	16.5			265.6	8.5			700
750			270.1	16.6	271.1	14.8			266.9	16.5			260.1	9.5			750
800			270.4	16.2	269.8	16.2			267.2	16.6			263.5	12.2			800
850			271.8	15.4	268.8	17.3			267.9	16.7			266.2	14.1			850
900					268.3	18.0			267.6	16.3			270.5	13.2			900
950					269.6	17.1											950
1000					274.6	16.6											1000

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 3 Jul 68 0615 EST Single		Ascn #K-2 3 Jul 68 0630 EST Combined		Ascn #K-3 3 Jul 68 0700 EST Combined		Ascn #K-4 3 Jul 68 0730 EST Single		Ascn #K-5 3 Jul 68 0800 EST Single		Ascn #K-6 3 Jul 68 0830 EST Double		Ascn #K-7 3 Jul 68 0900 EST Double		Ascn #K-8 3 Jul 68 0930 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	119.5	2.0	309.5	1.9	333.5	2.0	----	---	----	---	355.6	2.4	340.4	1.7	312.7	2.8	50
100	109.6	2.1	321 4	2.7	333.3	3.0	311.9	0.6	309.9	1.6	340.0	2.3	322.6	2.1	315.8	4.0	100
150	023.7	1.1	326.4	3.0	336.2	2.8	319.1	1.2	309.9	5.2	327.9	2.2	314.5	2.3	326.1	3.1	150
200	353.0	3.1	332.1	3.3	346.1	2.9	328.6	2.4	323.0	3.1	344.1	2.3	336.0	3.0			200
250	349.3	4.7	342.0	4.1	356.8	4.3	336.8	2.5	347.8	1.6	347.0	2.2	335.5	2.9			250
300	349.0	5.5	350.9	5.3	358.5	5.3	341.8	2.3	020.0	1.0	336.5	1.7	324.7	3.1			300
350	336.5	5.9	353.0	5.9	355.2	5.6	358.5	3.5	053.1	1.3	318.3	1.3	312.0	3.1			350
400	325.8	6.4	345.3	6.2	345.1	5.1	351.4	4.4	051.9	1.6	299.7	1.3	301.6	3.0			400
450	318.1	6.8	336.8	5.9	332.5	4.6	339.5	5.0	036.2	1.9	294.9	1.5	309.2	2.4			450
500	316.7	6.8	325.9	5.1	325.8	4.4	336.5	4.9	007.5	2.0	305.2	1.5	314.4	2.4			500
550	316.0	6.0	315.2	5.1	318.7	4.2	330.0	4.9	352.9	2.7	322.9	1.6	316.4	2.8			550
600	313.8	5.3	308.4	4.6	294.5	3.9	319.8	4.5	333.7	3.3	312.4	2.1	314.9	3.2			600
650	308.3	4.9	296.2	4.7	276.4	4.5	303.3	3.8			326.9	2.2	311.6	3.4			650
700	297.8	5.0	286.9	5.6	272.0	5.1	285.9	3.5			322.6	2.9	300.5	2.9			700
750	289.0	5.4	276.9	5.7	273.3	5.3	274.5	4.4			312.1	3.8	291.9	2.5			750
800	281.0	5.6	272.3	5.7	270.9	5.7	270.8	5.6			302.3	4.7	287.4	2.6			800
850	273.7	5.7	281.2	6.8	271.1	6.2	270.9	6.3			290.9	4.8	281.3	2.8			850
900	270.5	6.4	284.3	8.2	269.0	6.6	273.4	6.1					282.7	2.9			900
950	272.8	6.5	286.4	9.1	266.6	7.0	272.2	7.7									950
1000	274.1	7.3	287.4	9.5	270.0	7.5											1000
1050	275.8	7.9	286.6	9.8	272.6	8.1											1050
1100					271.8	7.7											1100
1150					269.7	7.0											1150
1200					277.1	9.5											1200
1250					279.3	10.3											1250
1300					278.0	10.3											1300

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 4 Jul 68 0730 EST Single		Ascn #K-2 4 Jul 68 0800 EST Single		Ascn #K-3 4 Jul 68 0830 EST Combined		Ascn #K-4 4 Jul 68 0900 EST Single		Ascn #K-1 5 Jul 68 0600 EST Double		Ascn #K-2 5 Jul 68 0630 EST Double		Ascn #K-3 5 Jul 68 0700 EST Double		Ascn #K-4 5 Jul 68 0730 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0	----	---		0.0	----	---		0.0		0.0		0.0		0.0	Sfc
50	054.7	0.2	----	---	249.4	0.9	274.6	2.0	083.7	1.4	041.6	0.7	030.5	0.2	214.1	0.2	50
100	310.5	0.4	131.1	0.9	249.4	1.8	288.0	2.9	109.5	1.5	065.8	0.8	143.8	0.3	196.8	0.6	100
150	287.9	1.4	131.1	2.8	249.3	2.5	319.4	2.9	167.4	2.3	153.3	1.6	178.0	2.0	192.2	2.2	150
200	291.0	2.0	144.0	0.6	249.2	2.5	317.2	2.8	189.7	4.9	189.0	4.4	201.9	4.8	199.4	5.6	200
250	299.6	2.7	300.5	1.3	249.1	2.5	314.9	2.3	200.7	4.6	250.8	2.0	206.4	5.0	212.6	5.0	250
300	309.5.	3.7	305.3	2.7	253.5	2.6	313.9	1.4	199.4	3.7	216.0	2.6	211.8	4.5	223.0	4.8	300
350	319.4	4.8	307.9	2.9	272.6	3.2	358.7	1.2	199.6	3.4	202.9	5.3	218.3	3.7	222.8	4.6	350
400	322.5	5.6	318.3	3.6	284.4	4.1	353.2	1.9	204.0	2.8	201.2	6.8	218.2	3.9	218.1	4.4	400
450	322.9	6.1	325.3	4.4	290.7	4.6	339.7	2.8	230.1	2.4	245.9	2.4	243.6	3.0	219.6	4.6	450
500	322.9	6.4	316.9	3.7	292.9	4.1	342.5	2.8	233.6	3.1	230.6	3.5	250.1	3.0	243.9	3.1	500
550	319.9	5.8	316.7	3.9	295.7	3.6	344.5	3.0	258.1	2.2	258.3	3.0	241.7	3.5	235.1	3.7	550
600	316.0	5.1	315.6	4.1	295.1	3.6	342.3	3.2	259.5	3.0	258.5	3.5	239.0	4.3	236.4	4.2	600
650	312.0	4.5	311.2	4.2	293.4	3.7	337.1	3.4	253.3	3.2	257.4	3.8	236.8	5.1	240.2	4.4	650
700	310.4	4.6	309.5	4.5	302.3	3.9	337.9	3.9	245.0	3.5	262.0	4.1	240.3	5.3	239.5	5.0	700
750	309.2	4.5	311.0	5.0	313.4	4.2	325.6	4.5	263.5	3.8	261.5	4.0			233.8	6.3	750
800	310.4	5.5	309.7	5.7	316.8	4.9	322.7	5.2	259.4	4.2	257.2	3.9			239.4	5.5	800
850	309.6	6.0	307.7	6.6	317.7	5.7	324.7	5.5	263.2	3.9	255.2	4.6			250.1	4.5	850
900	292.5	3.2	308.4	7.1	320.3	7.2	322.9	5.5	279.7	3.0	262.8	4.0			253.1	4.5	900
950	301.9	5.0			324.7	7.6	334.0	3.0	275.4	2.9							950
1000	304.2	6.3			328.5	8.0	330.6	4.8	276.3	2.8							1000
1050	305.8	6.9			332.7	8.4			272.9	3.2							1050
1100	308.4	6.8			340.7	6.0			270.2	3.6							1100
1150	309.7	6.6			344.9	6.8			297.5	3.0							1150
1200	309.9	7.6			341.4	6.9											1200
1250	309.8	8.3			342.7	6.7											1250
1300	309.9	8.5			318.5	4.9											1300
1350	310.7	8.6			317.7	7.8											1350
1400					325.1	13.4											1400
1450					327.9	11.1											1450
1500					330.0	9.2											1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-5 5 Jul 68 0800 EST Double		Ascn #K-5A 5 Jul 68 0800 EST Single		Ascn #K-6 5 Jul 68 0830 EST Double		Ascn #K-7 5 Jul 68 0900 EST Double		Ascn #K-8 5 Jul 68 0930 EST Double		Ascn #K-9 5 Jul 68 1000 EST Double		Ascn #K-1 6 Jul 68 0600 EST Single		Ascn #K-2 6 Jul 68 0630 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---		0.0	----	---	----	---		0.0	Sfc
50	196.1	0.6			214.0	0.9	206.9	1.6	165.7	1.4	194.5	2.3	165.6	2.1	339.4	0.9	50
100	192.4	1.4			211.8	1.5	190.4	2.6	163.7	2.2	197.5	3.6	167.2	2.0	335.8	1.7	100
150	186.0	3.2			212.9	1.9	211.7	2.2	157.7	2.0	204.1	3.7	329.9	0.6	328.6	2.3	150
200	205.0	2.4			223.0	2.8	231.0	2.8	150.6	1.9	212.8	3.8	273.4	0.6	319.8	1.7	200
250	211.4	5.2			229.9	4.2	236.9	3.3	168.7	1.6	223.6	3.8	237.0	1.2	270.6	1.9	250
300	212.4	7.7			233.3	5.1	234.7	4.1	199.7	1.6	233.8	4.0	231.3	2.1	262.4	2.4	300
350	225.2	5.2			235.6	5.5	230.4	5.4	216.6	2.1	237.4	3.7	275.8	2.9	277.4	2.4	350
400	230.6	4.2			231.7	5.7	240.0	4.3	215.5	2.9	238.8	4.2	294.8	4.1	300.9	3.6	400
450			222.6	5.1	232.8	4.7	233.7	4.5	216.8	3.4	239.8	4.8	306.2	5.5	313.0	5.3	450
500			220.2	4.7	232.2	4.5	231.7	4.6	224.0	3.2	241.3	5.3	317.1	7.4	319.9	6.7	500
550			221.1	4.5	231.1	4.7	237.2	3.8	222.8	2.7	245.8	5.1	320.9	7.0	321.9	6.2	550
600			223.9	4.3	234.7	4.1	236.1	4.1	253.9	2.1	244.8	4.6	323.1	6.1	324.1	5.2	600
650			227.7	4.3	232.2	4.8	233.9	4.8	244.5	2.5	237.7	4.0	324.9	5.3	331.5	4.7	650
700			230.3	4.8	235.0	4.6	232.7	5.3	257.3	2.9	238.0	3.5	331.8	5.3	329.3	5.1	700
750			235.8	4.9	231.9	5.8	232.3	5.6	258.1	2.9	246.8	3.2	330.9	4.8			750
800			240.9	4.9	230.3	6.8	235.3	5.5	244.8	2.8	253.0	2.3	326.7	4.7			800
850			244.7	4.8	265.3	3.0	239.8	5.0	265.5	1.6	252.4	2.5	320.9	5.0			850
900			247.2	4.7	263.7	2.8	250.3	3.7	243.0	1.8	251.0	2.6	313.1	5.2			900
950			252.6	4.1	257.8	2.7	272.5	1.9	225.0	2.1	250.2	2.8	307.4	5.8			950
1000			256.0	3.6	251.7	3.2			218.1	2.2	253.0	2.5	303.0	5.9			1000
1050			260.7	3.0					246.2	1.4	258.5	2.2					1050
1100									302.0	1.4	249.9	3.1					1100
1150											250.2	3.5					1150
1200											252.6	3.8					1200
1250											255.2	3.6					1250
1300											259.7	2.9					1300
1350											270.4	2.3					1350
1400											290.9	1.7					1400
1450											304.4	1.0					1450
1500											034.8	2.0					1500

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 6 Jul 68 0700 EST Single		Ascn #K-4 6 Jul 68 0730 EST Combined		Ascn #K-5 6 Jul 68 0800 EST Double		Ascn #K-6 6 Jul 68 0830 EST Double		Ascn #K-7 6 Jul 68 0900 EST Double		Ascn #K-8 6 Jul 68 0930 EST Double		Ascn #K-9 6 Jul 68 1000 EST Double		Ascn #K-1 8 Jul 68 0600 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---		0.0	----	---		0.0	----	---	----	---	----	---		0.0	Sfc
50	----	---	329.6	0.8	319.3	1.5	315.4	0.6	328.7	2.2	348.6	3.7	342.2	2.0	103.1	0.2	50
100	308.7	0.2	328.9	1.3	306.3	1.5	317.6	1.2	329.0	2.6	349.5	3.2	345.5	3.1	114.1	0.7	100
150	308.7	0.7	325.8	1.5	294.7	1.5	328.2	1.6	328.0	2.8	001.4	2.7	350.3	2.9	120.5	1.3	150
200	317.3	1.9	319.5	2.2	301.1	2.4	320.0	2.2	322.2	2.5	018.3	2.7	355.0	0.9	166.1	2.3	200
250	312.1	2.5	324.0	3.3	306.1	4.2	331.3	6.0	335.4	2.7	030.3	2.7	002.6	1.2	175.1	3.0	250
300	298.9	2.5	323.0	5.4	312.1	5.4	325.5	5.3	340.9	2.7	030.6	2.4	008.8	1.4	173.8	2.9	300
350	302.1	3.4	324.7	5.7	316.9	5.8	318.1	4.7	353.9	3.9	031.1	2.1	015.7	1.7	173.6	2.3	350
400	312.8	4.9	330.3	5.0	322.4	5.6	325.5	4.5	001.6	6.2	025.8	2.1	022.5	1.9	175.5	2.6	400
450	320.7	6.5	340.0	4.4	327.8	4.9	336.9	4.1			020.4	2.2	028.8	2.2	180.7	3.3	450
500	322.1	6.4	347.0	4.3	332.9	4.4	352.1	3.7			014.0	2.5	034.9	2.3	201.1	3.1	500
550	324.6	6.6	349.5	2.1	336.6	4.2	359.5	3.8			005.1	3.1	039.6	2.3	206.7	3.3	550
600	327.2	6.6	004.2	1.0	339.3	4.1	000.4	3.8					044.2	2.4	216.0	3.7	600
650	329.8	6.4	004.2	3.9	341.4	4.1							029.4	3.7	229.6	4.1	650
700	332.4	6.5	350.9	3.8	355.4	3.7							013.8	4.7	235.3	4.3	700
750	331.1	7.1	334.6	3.6	005.1	3.2									239.2	4.8	750
800			314.9	2.1	354.4	3.1									242.8	4.9	800
850			285.2	3.2	338.9	3.2											850
900			285.1	4.1	318.1	2.8											900
950			285.2	4.7													950
1000			281.7	4.8													1000
1050			280.2	4.9													1050
1100			280.7	5.8													1100
1150			277.2	6.4													1150
1200			274.1	6.7													1200
1250			273.4	7.1													1250

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 8 Jul 68 0630 EST Single		Ascn #K-3 8 Jul 68 0700 EST Double		Ascn #K-4 8 Jul 68 0730 EST Double		Ascn #K-5 8 Jul 68 0800 EST Single		Ascn #K-6 8 Jul 68 0900 EST Double		Ascn #K-7 8 Jul 68 0930 EST Double		Ascn #K-8 8 Jul 68 1000 EST Combined		Ascn #K-1 9 Jul 68 0630 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0	----	---	----	---	----	---	Sfc
50	165.7	0.2	079.2	0.4	028.2	0.4	165.2	0.5	213.0	1.0	185.4	2.5	132.7	2.7	----	---	50
100	148.9	0.6	012.1	0.7	045.6	0.5	164.6	1.0	209.7	1.5	189.8	3.0	139.0	2.6	191.7	1.2	100
150	141.8	1.4	136.9	0.8	099.2	0.5	164.0	1.7	192.3	1.9	192.9	2.7	146.0	3.0	191.7	4.0	150
200	168.4	2.6	185.4	2.3	186.6	1.6	194.2	2.4	195.4	3.0	193.8	2.7	152.2	3.6	195.3	4.7	200
250	176.0	3.5	174.5	2.8	180.4	2.4	201.2	3.0	204.2	3.4	200.9	2.4	159.4	4.4	207.3	5.9	250
300	178.9	3.8	166.4	2.5	174.4	2.6	197.7	3.2	218.6	2.8	218.5	2.3	165.8	4.3	219.7	8.4	300
350	175.7	2.7	173.1	2.5	183.3	2.5	203.6	2.8	222.2	2.7	232.5	2.6	299.9	2.0	224.0	9.2	350
400	182.5	2.4	201.2	2.6	213.2	2.4	216.6	2.9	236.3	2.8	240.4	3.1	228.1	2.1	227.4	10.9	400
450	196.9	2.7	222.7	3.4	237.6	2.8	229.4	3.3	253.8	3.1	260.7	2.7	205.1	3.5	230.0	12.8	450
500	215.2	3.1	246.1	3.3	250.0	3.3	237.0	3.4	261.0	3.4	254.9	2.8	209.1	3.5	233.0	13.5	500
550	227.0	3.8	248.5	4.1	261.3	3.8	254.6	4.1	258.9	3.5	244.1	3.0	211.2	3.4	236.1	13.7	550
600	235.1	4.5	254.1	4.5	264.6	4.1	263.7	5.0	258.6	3.6	240.1	2.8	211.4	3.4	239.7	13.0	600
650	240.9	5.2	248.7	5.0	260.3	4.2	265.9	5.7	253.3	3.8	241.0	2.4	204.8	2.9	243.2	11.5	650
700	245.7	5.0	265.9	4.2	261.4	4.1	266.9	5.7	258.6	3.3	246.8	2.7	202.1	1.8	236.6	10.1	700
750	251.1	5.1	250.4	5.1	266.2	3.7	266.0	5.4	259.1	3.3	249.7	3.0	244.4	2.7	253.8	8.3	750
800	254.6	5.1	268.1	4.0	261.5	4.0	265.2	5.2	262.3	3.3	248.3	3.4	228.3	4.2	258.6	7.7	800
850	255.8	5.2			258.8	4.2	264.9	5.2	266.4	3.5	243.3	4.2			249.2	7.6	850
900	254.6	5.2			260.2	3.9	265.0	5.2	263.5	4.4	240.5	5.1			247.9	7.4	900
950	256.5	5.1			260.3	3.7	261.6	4.9	252.4	5.7	238.8	6.0			246.7	6.3	950
1000	257.1	5.0			254.1	4.5	260.0	4.8	245.4	7.0	240.6	5.6			242.8	5.8	1000
1050	257.4	4.9			260.3	4.4	259.5	5.0	246.1	6.9	242.7	5.0			238.9	5.3	1050
1100	257.2	4.8							250.0	6.1	239.6	5.4			236.9	4.4	1100
1150	253.6	5.1							251.2	5.3	234.6	6.2			239.4	5.1	1150
1200	243.0	5.8							246.4	6.3	230.3	7.1					1200
1250	239.0	6.3							242.5	7.4	231.2	6.0					1250
1300	240.4	6.6							238.8	8.4							1300
1350	243.5	7.0															1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 9 Jul 68 0700 EST Single		Ascn #K-3 9 Jul 68 0730 EST Single		Ascn #K-4 9 Jul 68 0800 EST Single		Ascn #K-5 9 Jul 68 0830 EST Double		Ascn #K-6 9 Jul 68 0900 EST Double		Ascn #K-7 9 Jul 68 0930 EST Combined		Ascn #K-1 10 Jul 68 0608 EST Double		Ascn #K-2 10 Jul 68 0632 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---		0.0		0.0	Sfc
50	259.7	2.1	205.1	1.5	237.2	1.5	222.8	1.6	225.6	2.3	215.6	2.9	133.7	0.6	101.4	0.3	50
100	236.7	3.4	206.9	2.8	236.0	1.9	214.5	2.5	225.2	3.2	214.0	4.7	133.7	1.2	162.9	1.0	100
150	206.2	5.2	209.1	4.1	230.1	1.0	200.8	2.9	226.9	3.0	212.5	5.7	146.0	1.6	183.7	2.7	150
200	184.9	4.6	211.5	5.4	238.2	1.9	219.0	3.8	241.5	3.0	214.1	5.5	200.0	2.7	199.8	4.2	200
250	189.3	5.2	211.9	6.7	233.1	3.1	223.1	4.3	240.1	3.7	214.2	5.7	214.2	3.0	207.1	3.6	250
300	210.3	7.5	211.4	7.9	225.7	4.5	220.2	4.1	235.9	4.7	217.5	5.1	247.7	2.6	233.6	2.6	300
350	217.4	9.2	219.7	10.1	229.9	5.8	220.5	4.8	232.1	5.0	222.1	4.5	261.6	1.8	250.0	2.0	350
400	223.3	11.2	225.3	11.7	233.0	7.7	222.1	6.0	227.2	4.8	220.0	5.3	266.9	1.2	285.1	1.0	400
450	227.8	13.1	230.7	13.0	235.1	9.9	227.0	7.0	226.5	4.8	221.0	5.5	295.4	1.3	345.9	2.2	450
500	231.6	13.3	238.3	14.5	236.7	11.6	237.2	7.9	231.5	5.4	222.9	5.5	328.1	3.2	328.3	2.0	500
550	233.9	12.2	239.9	13.7	241.0	13.6	240.6	9.1	236.9	5.9	223.8	5.4	316.3	3.0	324.4	2.6	550
600	237.6	11.1	240.7	12.4	241.5	14.2			242.0	6.4	225.5	4.8	297.4	2.7	321.5	3.6	600
650	242.9	10.3	242.0	11.2	238.4	13.4			241.9	7.4			316.5	4.1	307.9	4.3	650
700	244.5	9.0	245.0	11.1	237.2	13.2			241.8	8.9			302.9	3.6	303.3	3.9	700
750	244.2	7.5	249.1	10.1	237.5	12.7							293.8	3.2	301.8	3.5	750
800	246.7	6.7	250.2	11.5	235.9	11.2							293.7	3.4	301.6	3.4	800
850	249.5	6.5			231.6	9.3							293.0	3.4	298.4	3.1	850
900	245.5	6.2			225.7	7.9									293.5	2.8	900
950	244.2	5.2			220.5	6.8									290.4	2.5	950
1000	240.9	5.2			215.6	6.5											1000
1050	238.0	5.4			214.7	6.3											1050
1100	235.9	5.1			218.3	6.0											1100
1150	230.6	4.2			228.9	5.7											1150
1200					233.7	5.6											1200
1250					232.0	5.5											1250
1300					226.6	5.6											1300
1350					223.2	6.3											1350
1400					221.3	4.8											1400
1450					226.4	6.1											1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 10 Jul 68 0700 EST Double		Ascn #K-4 10 Jul 68 0730 EST Combined		Ascn #K-5 10 Jul 68 0800 EST Combined		Ascn #K-6 10 Jul 68 0830 EST Double		Ascn #K-7 10 Jul 68 0900 EST Double		Ascn #K-8 10 Jul 68 0930 EST Single		Ascn #K-1 14 Jul 68 0630 EST Single		Ascn #K-2 14 Jul 68 0700 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0	----	---		0.0	Sfc
50	136.4	0.5		0.0	210.0	0.7	185.9	0.6	286.5	0.4	169.7	1.2	----	---	053.1	0.6	50
100	166.6	1.1	184.3	1.3	217.0	1.4	192.4	1.0	239.4	0.6	191.6	1.5	120.3	1.4	076.5	0.9	100
150	191.2	2.3	197.8	2.6	229.8	2.1	240.1	0.9	193.1	1.3	248.7	1.8	120.3	4.6	143.6	1.6	150
200	206.0	3.9	222.5	2.8	242.2	2.6	289.0	1.3	342.9	2.6	266.6	1.5	148.2	4.0	175.0	4.5	200
250	228.9	3.2	250.6	2.5	248.5	2.4	296.5	3.2	313.8	2.1	293.6	1.6	175.4	4.8	188.9	5.3	250
300	251.9	2.6	254.5	2.1	249.4	2.2	276.0	3.0	297.8	1.9	314.1	2.1	189.5	6.4	196.3	5.7	300
350	260.4	2.1	236.4	1.5	306.0	0.8	250.8	2.1	288.4	2.1	305.7	2.1	196.6	6.7	200.1	5.7	350
400	256.7	1.4	262.9	0.8	260.9	0.7	224.3	1.5	268.8	2.4	275.8	1.8	202.8	6.3	200.9	5.4	400
450	300.6	1.5	317.4	1.0	238.7	0.8	279.3	0.6	245.7	2.4	240.6	1.9	209.1	5.6	212.1	3.9	450
500	317.2	2.0	333.2	1.4	342.1	1.1	332.7	0.9	208.9	1.3	255.2	1.0	212.3	5.1	227.7	2.9	500
550	325.2	2.4	342.9	2.0	343.9	1.7	332.9	1.2	213.2	0.7	304.0	0.9	216.9	4.7	269.4	2.3	550
600	325.0	3.0	329.8	2.2	330.4	2.0	317.6	1.7	311.1	0.6	324.3	1.1	220.3	4.3	285.8	2.4	600
650	317.0	3.7	321.4	3.3	314.2	2.7	302.0	2.6	324.1	1.3	326.1	1.2	224.3	3.6	274.6	2.2	650
700	312.0	4.3	300.0	3.4	302.1	3.1	292.8	3.0	315.1	2.1	321.3	1.4	247.7	2.9	283.8	2.4	700
750	308.5	4.4	297.9	2.6	292.3	3.0	288.0	2.7	305.6	2.7	315.5	2.0	269.4	2.7	279.6	2.2	750
800	300.0	4.2	288.5	2.8	292.9	2.7	286.3	2.5	289.6	2.8	306.1	2.5	270.6	2.4	280.7	2.1	800
850	297.2	3.1	295.0	2.1	294.6	2.4	287.9	2.4	287.2	2.5	294.9	2.8	272.7	2.2	292.2	2.1	850
900	294.3	2.7	285.6	2.0	297.2	2.2	289.4	2.2	287.7	2.3	284.1	2.7	311.7	3.2	306.2	2.5	900
950	286.9	2.8	279.2	2.0	299.2	1.8	288.6	2.1	284.9	2.0	277.3	2.8	305.6	2.8	302.2	2.7	950
1000					297.6	1.9	283.2	1.6	277.5	1.9	276.0	2.8	300.7	2.6	287.1	2.4	1000
1050					291.2	2.1	281.0	1.6	280.7	2.0	276.7	2.7	295.2	2.5	281.0	2.3	1050
1100					287.1	1.9					278.1	2.7	289.4	2.5	293.3	2.1	1100
1150											285.0	2.8	291.1	2.4	284.9	2.1	1150
1200											282.7	2.7	287.1	2.4	287.4	2.1	1200
1250											282.5	2.7	287.2	2.5	295.4	2.2	1250
1300													289.1	2.5			1300
1350													285.5	2.6			1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-3 14 Jul 68 0730 EST Double D(°)	S(mps)	Ascn #K-4 14 Jul 68 0800 EST Double D(°)	S(mps)	Ascn #K-5 14 Jul 68 0830 EST Double D(°)	S(mps)	Ascn #K-6 14 Jul 68 0900 EST Double D(°)	S(mps)	Ascn #K-7 14 Jul 68 0930 EST Double D(°)	S(mps)	Ascn #K-1 17 Jul 68 0700 EST Double D(°)	S(mps)	Ascn #K-2 17 Jul 68 0830 EST Combined D(°)	S(mps)	Ascn #K-3 17 Jul 68 0900 EST Double D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---	----	---		0.0	----	---		0.0	Sfc
50	131.3	0.3	165.1	1.2	230.9	1.1	188.5	1.9	203.8	2.8	126.9	0.6	220.6	2.0	344.7	0.7	50
100	175.9	0.7	164.7	1.2	233.5	1.6	194.6	2.8	197.3	1.9	126.9	1.1	227.3	2.2	342.0	0.8	100
150	198.7	1.8	161.6	0.3	240.1	1.5	207.7	2.7	209.5	1.9	164.8	0.9	239.8	1.9	322.2	0.3	150
200	199.2	3.1	192.8	0.4	223.7	1.7	219.9	2.7	216.2	2.0	209.2	1.2	255.3	1.9	285.4	0.4	200
250	202.2	4.9	208.6	0.8	209.5	2.0	218.6	2.7	203.3	2.0	242.2	1.9	259.0	3.2	270.2	0.6	250
300	211.2	5.8	215.1	2.0	208.2	2.2	221.9	2.7	219.9	2.5	259.3	3.3	269.6	4.4	273.7	0.8	300
350	211.8	5.7	211.7	3.8	219.9	2.7	228.3	2.8	229.0	2.6	266.7	5.0	266.9	4.6	276.9	1.0	350
400	207.2	5.1	217.0	4.5	230.8	3.1	237.3	3.0	221.1	2.3	261.8	5.3	267.5	4.5	312.3	2.2	400
450	207.5	4.6	224.9	4.2	242.5	3.5	244.0	2.4	210.6	2.2	259.4	5.6	273.4	4.1			450
500	214.4	3.6	228.4	4.0	246.4	3.1	249.7	2.0	213.8	2.1	260.5	6.0	277.3	3.5			500
550	230.9	2.8	229.7	4.0	238.0	2.9	254.7	1.6	214.4	1.6	260.5	5.5	286.4	3.4			550
600	242.6	2.2	248.0	2.1	248.9	1.8	262.0	1.2	217.7	1.3	261.3	4.9	292.2	3.5			600
650	273.2	2.0	263.6	1.6	283.2	1.3	278.6	1.2	218.3	0.7	272.8	4.2	289.3	3.4			650
700	293.6	2.3	275.4	1.2	289.9	1.0	292.4	1.2	265.3	0.7	279.3	4.0	290.7	3.6			700
750	298.3	2.4	312.2	1.8	295.6	1.0	299.1	1.1	288.6	1.4	279.1	4.0	293.0	3.8			750
800	295.5	2.2	315.3	2.3	319.3	1.2	321.3	1.0	306.5	1.5	279.7	3.9	295.5	4.0			800
850	296.0	2.0	298.0	2.0	325.1	1.6	323.5	1.6	320.8	2.0	281.0	3.9	295.4	4.4			850
900	299.0	2.3	282.9	1.9	315.1	1.9	317.3	1.8	322.1	1.7	286.0	4.1	293.2	5.0			900
950	313.0	2.6	305.6	1.8	308.9	1.8	310.6	1.9	325.1	1.7	294.7	3.6	293.6	4.9			950
1000	309.9	2.2	314.1	1.9	316.8	1.8	312.2	2.1			304.2	3.3	293.8	4.9			1000
1050	305.6	2.0	318.3	1.9	315.2	1.6	316.7	1.7			306.7	3.5	288.3	6.0			1050
1100	304.9	2.1	321.1	1.8	316.4	1.7	321.0	1.5			311.1	3.8	286.2	5.3			1100
1150	305.4	2.2	321.0	2.0	316.5	1.8	325.8	1.3			308.7	3.9	286.7	4.3			1150
1200	308.9	2.2	319.2	2.0							315.7	4.0	293.1	4.5			1200
1250			318.9	1.9									292.9	4.4			1250
1300													294.6	4.5			1300
1350													299.2	5.0			1350
1400													300.3	4.9			1400

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-1 19 Jul 68 0600 EST Combined D(°)	S(mps)	Ascn #K-2 19 Jul 68 0630 EST Double D(°)	S(mps)	Ascn #K-3 19 Jul 68 0700 EST Double D(°)	S(mps)	Ascn #K-4 19 Jul 68 0730 EST Double D(°)	S(mps)	Ascn #K-5 19 Jul 68 0800 EST Double D(°)	S(mps)	Ascn #K-6 19 Jul 68 0830 EST Double D(°)	S(mps)	Ascn #K-1 21 Jul 68 0613 EST Double D(°)	S(mps)	Ascn #K-2 21 Jul 68 0630 EST Combined D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---		0.0		0.0	Sfc
50	229.0	1.8	217.2	2.4	255.0	3.5	254.2	4.0	252.9	2.9	233.9	2.5	081.0	0.6	048.3	0.2	50
100	224.5	3.4	230.3	4.1	251.9	4.6	255.4	4.1	257.7	4.7	233.7	4.2	073.1	1.1	048.3	0.3	100
150	220.2	5.1	245.2	5.5	249.3	4.8	249.0	5.1	263.5	5.2	232.9	4.4	075.0	1.8	077.7	0.9	150
200	222.7	7.2	248.0	6.2	255.1	5.4	239.5	5.7	262.0	5.2	234.1	4.6	091.3	3.0	097.3	4.6	200
250	226.9	8.6	248.5	7.2	258.3	6.2	238.5	5.7	258.5	5.0	237.3	4.9	108.9	3.4	113.7	4.3	250
300	232.0	9.4	247.2	8.7	257.5	7.2	241.6	5.5	253.7	5.5	241.0	5.3	114.0	3.3	114.8	3.8	300
350	237.3	9.5	251.0	9.0	257.2	7.9	249.2	5.1	249.7	6.2	245.3	5.9	113.0	3.0	111.9	3.2	350
400	237.1	9.6	254.0	9.3	256.6	8.3	249.1	5.7	248.2	6.5	245.7	6.3	106.2	2.1	110.3	2.8	400
450	240.9	9.2	255.3	9.1	258.3	8.2			245.0	6.6			107.4	2.1	107.6	2.6	450
500	244.6	8.7	255.3	9.1									106.6	1.8	110.1	2.5	500
550	245.4	8.4	255.3	9.7									104.8	1.7	114.6	2.6	550
600	244.4	8.8	259.2	9.1									106.9	1.7	118.5	2.6	600
650	251.7	8.7											112.7	1.9	115.2	2.0	650
700	255.7	9.3													117.7	1.1	700
750	255.2	10.5													193.6	0.8	750
800	257.9	9.3													190.9	0.7	800
850	259.1	10.0															850
900	256.7	10.8															900
950	253.1	11.3															950
1000	253.0	11.9															1000
1050	250.7	14.3															1050
1100	249.4	15.7															1100

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 21 Jul 68 0700 EST Double		Ascn #K-4 21 Jul 68 0730 EST Double		Ascn #K-5 21 Jul 68 0800 EST Double		Ascn #K-6 21 Jul 68 0830 EST Double		Ascn #K-7 21 Jul 68 0900 EST Double		Ascn #K-8 21 Jul 68 0930 EST Double		Ascn #K-1 22 Jul 68 0614 EST Double		Ascn #K-2 22 Jul 68 0630 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	Sfc
50		0.0	079.3	0.3	161.4	0.2	286.2	0.3	227.0	0.8	247.3	0.8	101.7	0.4	114.2	0.3	50
100	126.8	0.4	077.9	0.9	161.4	0.3	320.0	0.9	221.6	1.3	248.7	1.3	143.7	1.0	148.8	0.9	100
150	125.5	1.6	101.6	1.8	135.8	0.6	338.5	1.4	205.8	1.5	239.4	1.4	167.0	2.5	167.9	3.3	150
200	100.9	3.1	130.7	3.4	125.8	1.6	144.3	1.0	192.7	2.2	213.5	1.4	179.3	5.2	185.8	5.6	200
250	120.2	4.6	132.8	4.5	127.7	3.3	165.7	2.5	199.5	3.1	201.7	2.1	194.5	6.6	197.5	7.5	250
300	123.0	4.3	127.0	4.3	143.7	3.7	179.8	3.5	203.9	3.1	202.0	1.9	209.2	7.2	207.3	8.2	300
350	123.8	3.8	124.7	4.2	155.1	3.6	190.5	3.5	201.8	2.8	206.6	1.8	219.6	7.3	213.0	7.8	350
400	125.8	4.2	133.9	3.6	169.4	4.0	189.4	3.2	195.9	2.6	204.0	2.0	230.0	7.8	223.0	8.1	400
450	123.6	4.6	141.9	3.7	175.9	4.0	185.7	3.0	191.7	2.6	206.5	2.1	235.8	7.9	229.6	8.6	450
500	121.8	5.0	146.0	3.7	172.0	3.5	181.5	3.0	191.2	2.4	207.1	2.2	241.9	8.0	235.4	8.6	500
550	118.2	3.2	154.3	3.2	173.3	3.5	180.9	2.8	188.0	2.4	208.7	2.1	248.6	8.5	242.6	8.0	550
600	122.7	2.7	155.5	3.5	171.9	3.3	181.8	2.7	192.3	2.1	214.2	1.9	255.1	9.4	251.8	8.2	600
650	128.1	2.1	158.4	2.9	173.9	3.0	183.7	2.6	197.0	2.0	221.7	1.7	264.8	10.2	255.9	9.5	650
700	133.8	1.2	165.3	2.0	178.4	2.7	185.6	2.4	200.8	1.9	220.7	1.7	268.1	10.9	258.8	10.9	700
750	134.7	0.7	168.0	1.5	184.2	2.4	188.4	2.3	213.1	1.7	224.4	2.0	271.3	10.6	267.1	10.6	750
800	161.2	0.6	177.6	1.1	189.8	2.2	194.0	2.2	215.5	1.6	231.5	1.7	272.3	10.1	274.2	9.1	800
850	184.8	1.0	229.6	0.7	196.2	2.2	209.6	2.0	215.0	1.7	240.8	1.8	270.5	10.5	286.9	7.5	850
900	300.6	2.2	254.1	1.3	205.4	2.1	219.1	1.9	234.9	1.4	245.4	2.0	267.8	11.6	270.8	9.1	900
950	291.9	1.9	287.8	2.4	225.4	1.8	227.4	1.9	249.3	1.5	240.5	1.9	275.0	8.9	268.4	9.4	950
1000	296.1	2.2	263.2	1.6	259.3	1.8	235.0	2.0	238.6	2.1	236.4	2.3	276.7	8.6	268.9	9.0	1000
1050	296.1	2.0	256.8	1.6	243.9	1.9	240.5	2.1	238.3	2.6	240.3	2.4	273.0	9.7			1050
1100	294.6	2.4			242.2	2.0	238.1	2.6	251.6	2.2	246.3	2.3	270.5	10.1			1100
1150	284.8	2.3			252.4	2.3	236.7	2.8	237.3	2.7			271.2	8.9			1150
1200	260.2	1.7			261.4	2.1	237.1	2.5	237.4	2.6			274.5	7.3			1200
1250	279.5	2.4			267.7	1.0	243.5	1.3					267.7	9.8			1250
1300	298.4	2.6					212.4	1.2									1300
1350							195.5	1.6									1350
1400							197.9	2.0									1400

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-3 22 Jul 68 0700 EST Double		Ascn #K-4 22 Jul 68 0730 EST Double		Ascn #K-5 22 Jul 68 0800 EST Double		Ascn #K-6 22 Jul 68 0830 EST Double		Ascn #K-7 22 Jul 68 0900 EST Double		Ascn #K-8 22 Jul 68 0930 EST Double		Ascn #K-9 22 Jul 68 1000 EST Combined		Ascn #K-1 15 Oct 68 0930 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0	----	---	----	---	----	---		0.0	Sfc
50	300.5	0.2	163.7	0.3	185.1	0.4	205.4	1.1	197.8	2.2	175.8	1.8	235.8	2.6	140.1	0.3	50
100	205.8	0.7	181.0	1.3	193.7	2.0	208.6	2.1	197.5	3.0	179.5	2.8	255.4	3.3	144.2	1.3	100
150	188.1	2.9	193.1	3.3	199.5	5.0	216.2	3.0	208.3	2.5	190.1	2.6	264.7	3.3	147.1	2.6	150
200	200.6	5.9	209.6	5.4	213.7	5.7	220.0	4.1	239.1	2.5	220.8	2.6	264.7	3.4			200
250	212.1	7.8	220.1	7.3	231.6	6.2	225.7	5.1	242.4	3.1	225.6	2.3	260.4	3.9			250
300	223.1	8.5	235.5	8.5	247.0	7.0	244.6	5.7	244.3	4.4	241.3	2.4	257.8	5.2			300
350	235.0	8.3	250.6	8.4	257.5	8.3	261.7	7.9	251.8	5.7	263.4	3.0	262.9	6.3			350
400	244.7	8.3	257.5	9.0	263.2	9.9	269.5	9.9	264.3	7.3	273.3	4.4	265.5	7.1			400
450	251.4	8.2	266.3	9.8	272.1	10.5	272.8	11.0	269.0	8.7	271.4	5.9	264.0	7.4			450
500	260.0	8.3	274.8	10.4	276.9	10.5	274.8	10.8	270.2	9.3	266.9	6.6	268.9	7.9			500
550	263.6	9.9	277.7	11.0	276.5	10.0	274.9	10.7	272.2	9.2			268.7	10.6			550
600	265.7	11.1	276.8	11.1	272.0	10.4	274.0	10.7	273.4	9.3			268.6	12.6			600
650	287.2	8.7	275.9	11.4	271.0	10.5	275.4	9.5	275.2	9.6			272.0	13.1			650
700			281.0	9.0			282.9	7.0	271.8	11.1			278.1	12.8			700
750			278.8	9.1			277.7	9.2	270.2	12.0			282.3	12.2			750
800							272.5	9.6	275.7	9.7			284.1	12.2			800
850							273.3	8.5	274.3	10.1							850
900							274.6	7.6	274.0	10.4							900
950							277.5	6.6	274.6	10.3							950
1000							278.9	6.9	277.2	8.2							1000
1050							277.7	7.8	276.2	9.1							1050
1100							278.2	7.7	277.3	8.9							1100
1150							277.5	8.2	276.3	9.8							1150
1200							279.4	7.9									1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 15 Oct 68 1000 EST Double		Ascn #K-3 15 Oct 68 1030 EST Double		Ascn #K-4 15 Oct 68 1100 EST Combined		Ascn #K-1 16 Oct 68 0734 EST Single		Ascn #K-2 16 Oct 68 0759 EST Single		Ascn #K-3 16 Oct 68 0900 EST Double		Ascn #K-4 16 Oct 68 0930 EST Double		Ascn #K-5 16 Oct 68 1000 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0	----	---	----	---	----	---		0.0		0.0	----	---	Sfc
50	165.0	0.3	170.7	0.5	218.7	2.0	----	---	----	---	091.8	0.8	079.4	1.1	086.5	1.7	50
100	172.1	1.1	191.0	1.9	216.4	3.4	----	---	----	---	091.0	1.9	090.2	2.1	100.5	2.0	100
150	174.5	3.3	199.6	2.6	214.9	4.7	093.8	1.5	080.4	1.2	099.5	2.7	106.1	2.4	119.3	2.2	150
200	177.5	4.8	204.3	3.1	211.6	4.1	121.0	2.9	113.8	2.3	117.1	3.3	122.1	3.3	131.6	2.5	200
250	180.8	5.8	190.5	4.7	207.3	3.7	146.2	5.4	141.2	4.7	143.9	3.9	132.0	3.5	135.8	3.0	250
300	191.1	5.4	198.5	5.1	203.8	3.7	157.6	6.2	156.0	5.5	150.1	3.5	146.3	4.1	135.4	3.6	300
350	196.3	5.5	201.9	5.0	203.3	3.6	166.5	6.6	165.6	6.0	157.5	3.8	157.0	5.1	146.8	5.3	350
400	204.1	5.9	206.8	5.4	209.9	3.1	175.0	6.6	173.5	5.8	167.2	4.8	163.6	6.1	153.4	5.7	400
450	214.1	6.6	211.3	5.8	214.5	3.0	175.3	7.2	178.2	6.5	176.4	6.5	174.8	6.0	158.4	6.1	450
500	225.5	7.6	216.1	6.1	218.7	3.6	179.3	8.3	181.4	7.9	182.6	7.4	183.8	6.5	161.7	7.0	500
550	234.3	7.8	228.9	5.4	227.8	4.4	183.9	9.4	183.9	9.7	198.8	5.6	190.0	6.2	177.5	6.9	550
600	240.6	7.6	239.1	6.8			187.1	8.7	188.0	10.9	189.3	6.0	188.9	5.0	180.1	6.7	600
650	243.5	7.9	252.9	8.3			187.8	8.0	186.0	10.1	180.1	5.2	176.4	4.4	176.7	5.7	650
700	248.3	6.9					186.6	7.3	182.9	8.8	172.3	4.5	157.4	3.4	165.8	4.6	700
750							185.0	6.4	180.1	7.4	168.4	4.2	143.9	3.4	154.8	4.3	750
800							193.1	5.2	177.3	5.9	163.5	3.5	137.1	4.0	144.6	4.0	800
850									175.2	5.0	155.1	2.9	127.0	3.2	126.7	3.8	850
900									175.6	4.5	144.7	2.4	114.3	3.3	123.5	4.1	900
950									177.4	4.2	120.3	2.0	109.7	3.8	119.7	4.6	950
1000									177.5	4.4	109.1	2.2	109.6	3.8	101.8	4.0	1000
1050									186.5	3.7	115.2	2.3	104.3	2.8	102.6	4.2	1050
1100									189.1	3.2	111.0	1.8			101.2	3.7	1100
1150									186.2	2.3							1150
1200									173.6	1.4							1200
1250									153.8	1.7							1250
1300									171.5	1.8							1300
1350									181.9	1.6							1350
1400									186.6	1.3							1400
1450									198.7	1.2							1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-6 16 Oct 68 1030 EST Double		Ascn #K-7 16 Oct 68 1100 EST Double		Ascn #K-8 16 Oct 68 1130 EST Double		Ascn #K-1 17 Oct 68 0722 EST Double		Ascn #K-2 17 Oct 68 0800 EST Double		Ascn #K-3 17 Oct 68 0830 EST Combined		Ascn #K-4 17 Oct 68 0900 EST Combined		Ascn #K-5 17 Oct 68 0930 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---		0.0		0.0		0.0		0.0		0.0	Sfc
50	157.1	3.0	124.7	3.5	153.9	1.9	107.7	0.9	114.9	0.8	094.5	0.8	131.4	1.2	154.2	0.8	50
100	154.1	4.4	154.2	3.8	153.0	3.5	120.5	2.4	130.9	2.4	114.9	1.9	147.3	2.0	154.5	1.5	100
150	152.6	4.4	149.9	4.8	151.0	4.7	125.9	4.0	140.6	4.5	126.4	2.8	160.2	2.7	155.5	1.6	150
200	151.0	4.3	148.0	5.0	150.8	5.4	141.5	7.2	149.7	6.8	139.5	4.1	161.9	4.2	156.4	1.8	200
250	146.2	4.0	146.4	5.0	152.2	5.3	150.0	7.2	158.3	7.1	151.6	6.2	157.9	4.6	149.0	2.5	250
300	139.4	3.6	144.6	4.5	147.1	5.8	157.9	7.2	164.7	7.4	159.9	6.9	153.3	5.1	144.0	3.4	300
350	133.2	3.3	142.3	4.0	141.9	6.5	164.4	7.5	168.0	8.0	164.4	7.9	149.8	5.9	160.9	3.7	350
400	133.5	3.2	140.7	4.2	143.3	6.1	168.7	8.3	168.8	7.8	170.9	8.5	153.0	6.1	182.5	4.5	400
450	133.9	3.1	140.3	4.5	143.8	5.9	172.2	8.5	172.0	8.5	178.7	8.9	158.5	6.6	179.4	5.9	450
500	136.8	2.9	140.9	5.0	141.7	6.1	174.2	9.2	175.6	9.3	184.5	9.2	165.6	7.5	185.6	6.8	500
550	140.9	2.7	138.4	5.1	142.3	6.3	175.9	10.0	180.2	9.5	189.1	9.4	172.0	8.3	187.5	7.3	550
600	143.4	2.8	139.6	4.4	144.5	6.4	182.2	10.1	184.0	9.9	191.8	9.8	179.1	9.1	191.0	7.9	600
650	142.2	3.6	142.7	4.2	145.8	6.3	190.6	9.2	188.3	10.3	192.0	10.4	188.8	9.9	195.3	8.6	650
700	143.0	4.0	140.9	5.4	144.2	6.6	195.9	8.2	194.3	10.0	194.8	9.6	194.4	10.1	196.8	8.6	700
750	145.0	4.2	144.7	5.9	142.8	6.1	193.8	8.1	193.2	10.9	197.0	9.1	195.5	10.1	197.3	8.4	750
800	153.7	5.1	147.2	6.2	142.2	5.7	191.1	9.0	197.7	8.6	196.7	9.0	194.8	9.6	195.0	8.0	800
850			147.6	6.1	142.1	5.9	193.6	7.9	199.8	8.1	194.8	7.2	192.0	7.8	194.0	7.3	850
900			142.6	6.3	143.2	5.3	193.3	8.7	197.9	8.7	191.7	7.4	200.3	5.1	198.5	6.0	900
950			136.4	6.4	142.7	5.6	192.3	10.1	199.2	7.4	193.1	8.3	202.8	5.9			950
1000			130.7	5.7	142.4	5.8			203.9	7.1	197.9	8.2	203.4	7.2			1000
1050			125.7	5.3	142.2	6.0			204.1	9.2	209.7	6.6	207.9	7.6			1050
1100			125.9	6.1	141.0	5.7			207.6	9.3							1100
1150			128.4	7.8	139.3	5.5			214.2	9.0							1150
1200			131.0	8.7	136.4	5.8			222.0	8.6							1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-6 17 Oct 68 1000 EST Double		Ascn #K-7 17 Oct 68 1030 EST Double		Ascn #K-8 17 Oct 68 1100 EST Combined		Ascn #K-9 17 Oct 68 1130 EST Double		Ascn #K-1 18 Oct 68 0700 EST Double		Ascn #K-2 18 Oct 68 0730 EST Double		Ascn #K-3 18 Oct 68 0800 EST Double		Ascn #K-4 18 Oct 68 0830 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---		0.0		0.0	----	---		0.0	Sfc
50	145.7	2.2	156.9	3.5	125.4	2.5	130.6	2.7	085.8	1.4	085.5	1.4	090.4	1.5	098.1	0.8	50
100	158.9	2.6	155.4	5.1	138.6	4.3	133.5	4.2	094.7	2.8	101.7	3.3	104.3	2.6	120.7	2.1	100
150	167.5	3.0	157.5	5.4	139.9	4.7	138.3	4.0	111.8	4.1	113.5	4.7	119.8	3.5	132.6	3.5	150
200	169.6	3.7	161.7	5.5	135.7	4.6	154.2	4.6	130.4	6.0	125.0	5.9	135.8	4.6	142.3	4.8	200
250	169.3	3.9	157.4	4.8	137.6	4.4	158.3	3.9	136.0	7.0	136.3	7.2	145.7	5.7	145.6	5.7	250
300	166.2	3.8	155.2	4.8	151.4	4.5	151.2	4.9	147.5	8.0	143.8	8.1	150.8	8.0	149.5	6.4	300
350	154.3	5.1	150.6	4.6	157.4	4.2			149.6	8.9	149.6	8.4	155.6	8.1	153.0	7.0	350
400	165.7	5.3	150.6	4.2	161.6	4.0			146.4	9.6	153.0	8.6	155.8	8.9	156.4	7.8	400
450	172.7	5.4	158.5	3.6	160.1	4.3			149.7	10.3	152.2	9.3	153.9	9.9	159.3	9.2	450
500	179.4	5.5			165.1	4.8			154.8	10.2	153.3	10.3	159.2	10.3	162.9	9.2	500
550	178.9	6.7			165.4	4.8					154.9	11.6	164.7	10.1	164.9	10.8	550
600	182.1	6.6			165.6	4.4					166.8	9.6	169.8	10.3	166.3	12.2	600
650	183.9	6.5			160.5	4.2					168.1	10.8	172.6	11.9	167.4	12.8	650
700	186.0	6.7			159.2	3.9							177.4	12.6	174.2	11.4	700
750	188.9	7.3			163.6	4.3							182.6	13.1	175.7	13.7	750
800	195.6	6.7			171.0	4.2							190.8	12.4	175.6	16.7	800
850	199.7	6.5			174.0	4.6							191.8	13.0	187.4	13.8	850
900	199.5	6.8			175.0	5.2							190.3	14.0	187.3	16.4	900
950	205.5	6.0			182.5	5.1							199.8	11.5	187.5	18.1	950
1000	209.7	5.7											198.3	11.6	187.8	19.3	1000
1050	210.7	6.0											204.0	9.3			1050
1100	223.4	4.9											203.6	10.2			1100
1150	230.3	4.1											200.6	12.3			1150
1200	221.4	2.8															1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-5 18 Oct 68 0900 EST Double		Ascn #K-6 18 Oct 68 0930 EST Double		Ascn #K-7 18 Oct 68 1000 EST Double		Ascn #K-8 18 Oct 68 1030 EST Double		Ascn #K-9 18 Oct 68 1100 EST Double		Ascn #K-1 20 Oct 68 0704 EST Single		Ascn #K-2 20 Oct 68 0730 EST Single		Ascn #K-3 20 Oct 68 0800 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---	----	---	----	---	----	---	----	---	Sfc
50	127.3	1.0	124.9	0.7	169.2	0.9	154.0	2.4	158.0	1.8	----	---	----	---	----	---	50
100	137.6	2.6	147.6	1.8	169.4	1.6	150.8	3.6	158.7	3.2	----	---	----	---	----	---	100
150	145.8	3.0	150.7	2.6	169.8	2.1	146.5	4.0	159.2	4.6	209.7	2.2	189.7	2.7	195.8	2.5	150
200	154.7	3.4	152.8	3.1	160.9	3.1	149.7	4.3	159.4	6.9	230.6	4.1	206.6	4.1	210.0	4.0	200
250	157.0	4.6	158.8	3.4	167.7	4.3	156.5	4.5	160.4	8.0	254.7	6.5	238.1	5.0	233.9	5.1	250
300	152.6	6.5	161.0	4.1	173.0	5.1	158.0	5.5	160.8	8.1	251.5	8.2	256.4	7.7	259.4	7.9	300
350	153.4	6.8	164.0	5.3	175.6	4.8	159.1	6.3	159.5	7.6	269.0	9.1	266.7	9.3	269.4	9.3	350
400	158.0	6.9	167.7	6.9	175.7	5.2	160.1	6.8	159.9	8.6	298.6	11.7	277.0	9.6	277.1	8.3	400
450	162.0	8.1	172.5	7.9	175.7	5.7	160.5	7.4	159.9	9.2	288.9	9.3	283.3	8.3	280.3	7.5	450
500	164.4	8.5	172.0	8.7	170.1	6.7	157.5	7.8	160.4	9.8	279.1	8.0	280.9	7.6	276.4	7.2	500
550	167.6	9.0	171.7	8.9	167.0	8.4	154.7	8.3			271.3	7.3	271.8	7.4	268.6	7.4	550
600	170.6	9.7	170.7	9.1	169.3	10.0	159.2	8.3			266.7	6.8	263.8	7.1	264.4	7.6	600
650	172.2	10.6	168.4	10.4	171.6	9.6	164.0	8.4			267.6	6.4	262.0	6.5	261.7	7.0	650
700	172.1	12.5	168.0	11.6	170.8	10.5	164.3	9.6			268.7	6.0	263.3	5.8	262.0	6.7	700
750	173.3	12.2	169.3	12.1	170.0	11.3	163.8	10.9			268.7	5.7	266.9	5.5	265.1	7.0	750
800	178.9	11.6	172.5	12.0	169.4	11.8	163.6	11.9			270.4	5.8	269.4	6.1	266.2	7.1	800
850	182.4	13.8	173.4	13.5	169.7	11.8	164.1	13.2			274.5	6.3	272.2	6.7	268.9	7.2	850
900	183.2	17.4	173.9	14.6			165.2	15.2			278.5	7.0	274.9	7.1	272.8	7.6	900
950			179.8	13.1			167.1	17.1			281.1	7.5	277.1	7.4	275.5	8.1	950
1000			183.4	15.5			169.8	17.2			282.0	7.3	278.0	8.0	274.1	7.9	1000
1050			186.7	16.8			175.4	14.9			283.6	7.9	278.4	8.3	275.0	8.1	1050
1100			194.0	14.7			177.0	16.8			285.5	8.3	281.3	8.6	277.0	8.7	1100
1150											287.4	8.8	283.7	9.2	279.3	9.6	1150
1200											288.7	9.5	284.5	10.0	281.1	10.4	1200
1250											289.1	9.9	285.7	9.8	281.3	10.2	1250
1300											287.6	10.2			281.1	9.9	1300
1350											286.8	10.5			280.2	9.9	1350
1400											286.3	10.9			278.8	10.6	1400
1450											284.9	11.2			277.5	12.5	1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-4 20 Oct 68 0830 EST Double		Ascn #K-5 20 Oct 68 0900 EST Combined		Ascn #K-6 20 Oct 68 0930 EST Double		Ascn #K-7 20 Oct 68 1000 EST Combined		Ascn #K-8 20 Oct 68 1030 EST Double		Ascn #K-9 20 Oct 68 1100 EST Combined		Ascn #K-10 20 Oct 68 1130 EST Double		Ascn #K-1 21 Oct 68 0700 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---	----	---	----	---	----	---	----	---	Sfc
50	130.4	0.1	160.6	0.1	169.9	0.3	294.0	1.6	275.8	3.0	288.9	1.7	309.5	2.2	284.4	1.8	50
100	212.8	1.5	235.9	1.2	256.9	2.0	288.1	2.1	280.8	2.9	284.5	2.5	309.1	3.0	287.7	3.9	100
150	236.7	2.4	253.7	2.7	277.6	3.7	278.6	2.1	282.7	2.3	277.8	2.6	306.5	3.4	290.7	5.7	150
200	252.9	4.1	271.0	5.0	283.6	4.2	279.4	1.9	276.1	2.4	276.1	2.7	284.0	2.6	296.3	6.4	200
250	260.7	6.8	273.1	6.5	285.6	4.7	286.1	1.8	287.4	2.3	276.4	2.8	262.8	2.2	305.1	7.5	250
300	271.4	8.8	280.0	7.4	291.1	5.0	295.1	2.2	286.2	2.5	269.9	2.9	248.3	2.1	310.9	8.3	300
350			291.0	7.8	301.1	5.7	296.3	2.2	293.8	2.9	258.1	3.0	247.8	2.6	315.8	8.7	350
400			302.8	7.8	303.2	6.0	298.9	3.1	301.3	4.0	252.6	2.7	248.7	3.0	323.3	8.5	400
450			291.0	5.5	296.9	7.7	298.9	4.4	300.1	5.3	249.4	2.2	253.5	3.3	327.2	8.6	450
500			280.8	7.3	291.5	10.1	297.7	6.1	298.7	6.3	270.5	4.3	259.1	3.8	328.6	8.6	500
550			275.7	7.7	284.7	9.2	297.0	8.7	296.7	7.1	289.2	6.3	264.4	4.8	328.7	8.7	550
600			272.3	7.8	270.4	7.0	293.9	8.7	294.7	7.8	290.8	6.6	269.2	5.9	328.6	8.7	600
650					272.5	7.4	289.1	8.5	292.9	8.9	287.6	8.1	275.9	6.9	328.4	7.8	650
700							286.8	8.9	291.5	9.5	286.5	9.0	282.0	8.1	326.0	9.1	700
750									290.3	9.4			284.6	9.0	323.6	8.2	750
800									288.4	9.3			288.9	9.4	323.2	7.3	800
850									287.8	8.8					324.6	8.0	850
900															325.8	9.0	900
950															325.9	8.9	950
1000															326.1	7.5	1000
1050															325.4	8.0	1050
1100															324.7	9.6	1100
1150															326.3	6.4	1150
1200															325.5	7.4	1200
1250															324.2	8.5	1250
1300															321.4	7.3	1300

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-2 21 Oct 68 0730 EST Double		Ascn #K-3 21 Oct 68 0800 EST Double		Ascn #K-4 21 Oct 68 0830 EST Double		Ascn #K-5 21 Oct 68 0900 EST Double		Ascn #K-6 21 Oct 68 0930 EST Double		Ascn #K-7 21 Oct 68 1000 EST Double		Ascn #K-8 21 Oct 68 1030 EST Double		Ascn #K-9 21 Oct 68 1100 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---		0.0	----	---	Sfc
50	283.6	2.7	278.1	1.5	288.3	1.7	293.8	2.5	306.5	4.1	297.5	3.4	279.6	1.4	310.1	3.5	50
100	288.3	4.7	286.4	3.3	295.7	3.1	302.6	4.5	303.0	4.6	295.1	3.8	279.6	2.9	311.6	3.9	100
150	293.9	6.3	290.5	5.0	303.9	4.5	306.9	5.6	305.7	4.2	290.2	4.2	295.5	3.2	303.7	4.0	150
200	300.1	7.8	295.5	6.1	310.7	6.1	308.5	6.3	310.8	3.9	286.3	5.2	293.6	3.5	292.2	4.2	200
250	305.0	8.4	307.5	6.8	314.0	7.4	309.9	7.1	298.7	5.0	283.5	6.1	294.0	3.9	286.1	4.3	250
300	308.7	8.7	304.9	9.2	315.5	7.9	312.2	8.0	293.6	6.1	284.6	6.6	295.8	4.3	288.4	4.0	300
350	311.6	8.7	305.0	10.5	315.8	7.5	313.8	8.6	297.2	6.9	291.9	6.4	297.0	4.8	291.1	3.7	350
400	317.2	8.4	312.1	8.2	316.9	7.6	315.1	8.7	302.8	7.9	300.8	6.4	297.3	5.1	291.2	3.5	400
450	322.5	8.5	318.1	8.3	318.1	7.9	312.4	8.5	307.5	9.2	301.1	7.3	297.1	5.4	291.4	3.4	450
500	326.0	9.0	321.8	8.6	317.9	7.4	311.0	8.0	310.7	7.9	304.2	6.9	296.0	5.5	297.1	3.4	500
550	328.6	9.2	323.5	8.5	318.7	7.1	311.3	7.4	313.4	7.0	303.0	5.9	296.9	5.9	303.5	3.3	550
600	330.8	7.5	323.1	7.7	322.2	7.5	311.6	7.8	314.7	7.1	304.1	6.9	300.0	6.6	313.7	3.4	600
650	326.0	8.4	322.4	8.4	325.1	8.1	312.2	8.3	316.1	7.7	311.8	5.7	306.0	6.7	314.9	3.7	650
700	321.6	9.6	325.1	8.4	327.4	8.7	314.5	8.3	318.8	8.4	313.1	6.3	312.0	6.7	312.1	4.2	700
750	321.7	8.6	326.4	8.4	328.9	8.1	315.6	7.3			312.9	6.9	315.4	6.7	307.5	4.5	750
800	321.4	9.4	326.4	8.1	329.2	8.5	318.8	7.1			313.4	7.0	317.9	6.4	304.5	4.7	800
850	322.3	8.1	325.8	8.8	328.7	8.8	319.8	8.3			317.1	6.2	316.2	7.1	303.7	4.9	850
900	323.5	7.3	325.0	10.0	327.4	9.1	320.3	9.0			316.9	6.6	320.3	6.2			900
950	323.2	8.9	324.2	11.6	325.8	10.2	320.6	9.0			318.8	6.9	319.4	6.9			950
1000	322.9	10.9	327.6	8.1	326.1	9.8	321.9	8.8			321.2	7.1	322.7	6.9			1000
1050	325.7	5.8	328.4	6.2	326.2	9.6	323.5	8.8			321.1	7.8	323.8	7.1			1050
1100	322.7	10.5	325.7	8.7	327.2	9.8	326.1	8.4			321.0	7.9					1100
1150	322.7	11.2	325.7	9.1	325.0	8.2					321.4	7.4					1150
1200	323.7	9.9	327.6	7.1							323.2	7.8					1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-10 21 Oct 68 1130 EST Double		Ascn #K-1 22 Oct 68 0720 EST Single		Ascn #K-2 22 Oct 68 0800 EST Single		Ascn #K-3 22 Oct 68 0845 EST Double		Ascn #K-4 22 Oct 68 0900 EST Double		Ascn #K-5 22 Oct 68 0930 EST Double		Ascn #K-6 22 Oct 68 1000 EST Double		Ascn #K-7 22 Oct 68 1030 EST Combined		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0	----	---	----	---		0.0		0.0		0.0		0.0		0.0	Sfc
50	315.9	1.0	----	---	----	---	075.9	0.8	075.6	0.6	006.3	0.6		0.0	201.1	1.1	50
100	319.3	1.8	----	---	----	---	081.1	1.5	094.3	1.8	057.4	0.7	162.9	1.4	201.0	2.2	100
150	322.1	2.6	092.3	2.5	113.7	1.5	126.9	2.4	145.3	2.8	153.7	2.1	171.2	3.2	200.8	3.4	150
200	324.4	3.2	116.0	3.7	141.4	2.9	173.9	4.2	169.6	4.2	173.5	4.2	178.1	4.6	198.9	4.7	200
250	325.9	3.6	155.6	5.2	167.3	5.4	192.8	5.8	184.4	5.2	186.0	6.1	184.5	5.9	196.0	6.0	250
300	309.4	3.8	177.3	5.8	182.6	5.8	199.3	5.9	195.4	6.4	196.1	7.1	190.0	7.3	200.8	5.9	300
350	296.3	4.1	187.7	6.6	194.8	6.3	205.9	7.1	202.7	7.4	201.5	7.5	197.7	7.7	201.7	6.3	350
400	284.5	4.0	190.3	7.0	204.6	6.7	211.5	8.4	207.4	8.2	208.6	7.5	204.8	8.6	208.4	7.5	400
450	287.1	3.9	197.0	7.1	211.4	7.7	216.2	6.3			213.7	7.7	208.8	9.6	212.8	8.9	450
500	297.0	4.0	203.7	7.4	212.4	8.4	209.5	7.1			212.8	8.4	209.9	9.5	214.9	10.2	500
550	296.8	5.1	208.3	7.8	209.9	8.6	212.2	7.6			213.4	8.7	208.3	10.7	215.9	11.2	550
600	296.4	5.9	207.1	7.3	203.6	8.1	214.0	8.9			213.6	8.8	209.8	11.7	216.7	12.2	600
650	303.4	3.7	206.4	7.1	201.2	8.1	217.3	9.6			214.8	10.8	213.0	12.4	218.2	13.5	650
700	306.7	5.6	205.2	6.9	201.0	8.3					215.5	12.7	215.3	12.2	219.6	14.6	700
750			203.7	7.0	202.3	8.8					217.1	14.2	217.1	14.1	222.7	13.8	750
800			203.7	8.0	204.2	10.3					224.3	14.0	219.9	13.7	224.9	13.6	800
850			201.8	9.2	206.1	11.5					225.9	14.0	219.5	12.6	225.4	14.4	850
900			202.8	10.2	209.3	12.3							215.6	12.3			900
950			205.1	10.8									212.9	12.1			950
1000			206.3	11.0									211.1	12.5			1000
1050			206.4	11.4									210.7	12.9			1050
1100			208.5	11.0									211.5	13.3			1100
1150			210.6	10.2									214.5	9.2			1150
1200			211.6	9.7													1200
1250			214.8	10.8													1250
1300			218.8	10.8													1300
1350			221.3	11.9													1350
1400			221.5	13.3													1400
1450			219.3	12.8													1450

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-8 22 Oct 68 1100 EST Double		Ascn #K-9 22 Oct 68 1130 EST Double		Ascn #K-10 22 Oct 68 1200 EST Double		Ascn #K-1 23 Oct 68 0700 EST Double		Ascn #K-2 23 Oct 68 0730 EST Double		Ascn #K-3 23 Oct 68 0800 EST Double		Ascn #K-4 23 Oct 68 0830 EST Double		Ascn #K-5 23 Oct 68 0900 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	196.1	1.8	195.1	2.4	191.1	2.4	236.4	1.8	232.4	1.7	236.8	3.1	228.0	3.9	246.7	3.9	50
100	199.8	3.6	199.8	4.4	197.6	5.0	237.7	3.8	238.3	3.9	244.5	4.5	231.1	5.0	234.9	4.3	100
150	206.0	5.2	205.1	5.9	198.6	6.4	238.8	6.0	242.2	6.2	259.3	4.7	235.9	4.9	225.8	4.5	150
200	199.2	5.2	208.7	6.4	205.1	6.6	243.4	9.3	245.2	7.1	259.4	6.0	239.3	5.5	227.1	4.3	200
250	201.1	5.1	207.5	6.8	208.9	5.7					258.7	7.4	241.9	6.2	231.9	4.2	250
300	206.0	5.0	207.0	7.3	223.3	5.4											
350	198.2	5.0	211.8	7.8	215.2	5.7							245.1	6.7	241.6	4.3	300
400	197.6	5.6	218.0	8.5	206.9	6.1									245.0	4.6	350
450	205.2	7.2	217.8	9.5	213.8	5.7									267.1	4.9	400
500	209.2	8.4	218.0	10.7	219.3	5.6									274.4	5.5	450
															273.0	5.8	500
550	212.3	9.5	223.6	11.7	220.6	5.9									273.3	5.8	550
600	218.4	10.8	224.6	12.6	221.1	6.7									269.6	6.2	600
650	225.1	12.2	225.2	13.6	220.2	8.6									263.8	7.0	650
700	227.9	13.3	225.4	14.4	216.4	9.5									264.1	8.5	700
750	228.1	14.1	225.6	15.2	215.5	10.7									265.1	10.1	750
800	228.9	13.4	227.1	15.1	219.0	12.1									275.4	12.6	800
850	226.4	12.2	230.1	14.2	225.9	12.4											850
900	219.9	12.5	231.2	13.4	230.6	13.7											900
950	215.7	12.2	232.3	14.6	233.4	15.2											950
1000	213.0	11.0	230.4	12.3	231.6	16.1											1000
1050	211.9	11.2	223.7	14.2													1050
1100	213.1	11.9	221.2	15.7													1100
1150	215.3	12.5	214.5	11.7													1150
1200	217.1	13.0															1200
1250	220.1	12.6															1250
1300	223.1	11.9															1300
1350	225.8	12.4															1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-6 23 Oct 68 0930 EST Double		Ascn #K-7 23 Oct 68 1000 EST Combined		Ascn #K-8 23 Oct 68 1030 EST Double		Ascn #K-9 23 Oct 68 1100 EST Double		Ascn #K-1 24 Oct 68 0700 EST Double		Ascn #K-2 24 Oct 68 0730 EST Double		Ascn #K-3 24 Oct 68 0800 EST Double		Ascn #K-4 24 Oct 68 0830 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---		0.0		0.0		0.0		0.0	Sfc
50	242.9	4.3	232.0	3.7	239.1	2.6	233.4	4.0	350.1	0.4	071.4	0.3	066.7	0.8	037.2	0.7	50
100	241.9	7.9	232.1	5.9	239.1	5.1	233.5	6.0	025.5	1.3	036.8	1.1	063.2	1.1	073.2	1.6	100
150	238.1	8.9	232.1	5.9	238.7	6.3	233.6	6.9	077.2	1.9	093.1	1.9	101.4	2.2	113.3	3.1	150
200	266.0	5.4	229.0	6.1	243.2	6.7	231.6	7.3	114.6	3.6	118.3	3.8	117.9	4.4	129.8	5.1	200
250	249.7	5.3	227.6	6.1	249.1	7.0	229.8	7.6	135.3	6.3	127.0	5.7	134.1	5.6	136.5	6.2	250
300	245.5	7.0	232.0	5.5	259.2	6.3	238.3	7.0	134.0	6.4	131.6	6.3	140.5	6.6	140.2	7.4	300
350	255.0	7.2	237.5	4.9	267.9	5.9	242.5	6.9	140.1	6.1	131.7	6.1	143.4	6.8	140.2	7.9	350
400	266.8	6.8	243.8	5.2	269.0	5.6	244.0	7.0	146.1	5.9	133.9	6.0	145.5	5.6	138.8	7.8	400
450	271.8	5.6	249.5	5.5	267.6	4.8	248.0	6.6	148.0	5.6	137.2	5.8	144.0	5.3	140.1	7.4	450
500	272.6	6.9	252.9	5.8	277.5	5.5	251.9	6.1	151.1	5.1	140.0	5.5	143.5	5.1	148.1	6.8	500
550	268.7	7.8	254.1	6.1	277.2	6.7	253.4	5.6	151.9	5.3	147.1	5.2	143.9	5.2	150.7	6.2	550
600	268.8	8.3	255.6	6.4	271.9	6.9	254.9	5.6	154.3	5.1	153.0	5.1	143.8	5.6	153.5	5.8	600
650			260.3	6.4	264.6	7.0	256.2	5.9	159.9	4.6	158.2	4.9	144.7	5.5	156.2	5.4	650
700			264.5	6.5	258.7	7.0	251.5	6.1	164.2	4.4	163.6	4.6	145.4	5.7	158.9	4.9	700
750			265.8	6.7	266.2	6.1	247.1	6.3	161.3	4.8	166.6	4.7	145.9	6.3	158.9	4.4	750
800			268.0	7.1			249.6	6.2	166.7	4.2	175.3	4.1	156.4	5.4	158.6	4.5	800
850			271.7	7.9			252.2	6.1	169.0	3.8	175.5	4.0	160.3	5.1	159.9	5.0	850
900			273.2	8.5			256.1	5.7	169.1	3.7	170.9	4.1	162.5	5.0	165.4	4.8	900
950			270.9	8.9			260.5	5.4	170.3	3.6	166.9	4.1	169.0	4.9	177.1	4.3	950
1000			268.9	9.7			263.8	5.6	171.6	3.2	171.5	3.3	176.5	4.3	185.3	3.6	1000
1050			267.5	10.9			266.1	6.1	175.7	3.0	182.6	2.6	177.2	4.1	173.9	4.4	1050
1100							271.4	6.7	185.6	2.6	187.7	2.4	170.4	4.2	170.1	4.3	1100
1150							281.1	7.7	205.1	2.3	180.3	2.8	177.6	2.9	171.0	3.6	1150
1200							275.8	9.0	216.2	2.4	187.2	2.7	180.3	2.6	177.4	2.9	1200
1250									215.1	2.8	205.4	2.5	180.8	2.9	184.2	3.1	1250
1300													187.4	3.1			1300
1350													196.0	3.0			1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-5 24 Oct 68 0900 EST Double D(°)	S(mps)	Ascn #K-6 24 Oct 68 0930 EST Double D(°)	S(mps)	Ascn #K-7 24 Oct 68 1000 EST Double D(°)	S(mps)	Ascn #K-8 24 Oct 68 1030 EST Double D(°)	S(mps)	Ascn #K-9 24 Oct 68 1100 EST Double D(°)	S(mps)	Ascn #K-1 25 Oct 68 0853 EST Double D(°)	S(mps)	Ascn #K-2 25 Oct 68 0930 EST Double D(°)	S(mps)	Ascn #K-3 25 Oct 68 1000 EST Double D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0	----	---		0.0	----	---	----	---	----	---	Sfc
50	053.9	1.2	049.6	1.0	082.2	0.6	125.2	1.9	143.0	1.4	274.3	2.5	254.0	1.6	253.7	1.8	50
100	091.2	1.9	090.7	1.8	112.0	1.4	135.6	2.8	143.0	2.8	261.6	3.5	250.7	3.3	253.5	3.6	100
150	113.1	3.3	110.8	2.7	120.7	2.3	135.8	3.8	137.3	3.1	261.8	4.5	247.7	4.5	249.5	5.2	150
200	126.7	5.0	129.2	3.8	125.9	3.4	131.9	4.7	128.7	3.1	265.8	5.6	247.2	4.5	247.7	6.1	200
250	137.1	6.9	132.0	5.2	135.1	5.0	132.1	4.1	130.8	3.7	270.8	6.8	251.3	5.7	246.6	6.3	250
300	146.0	7.9	133.1	6.2	132.9	5.4	134.0	4.0	133.9	4.4	272.2	7.4	248.5	5.7	247.4	6.4	300
350	147.0	8.2	134.3	6.8	130.8	5.6	139.0	3.9	134.7	4.5	271.9	7.4			249.9	6.4	350
400	147.6	8.2	141.2	7.9	129.3	5.9	147.8	3.7	136.6	4.4	269.6	6.9			249.2	6.4	400
450	149.5	8.0	145.1	8.5	138.9	7.1	143.8	4.5	139.1	4.2	268.2	7.8					450
500	155.5	7.4	146.7	8.5	142.5	7.2	134.2	5.3	134.0	4.8	272.9	8.9					500
550	156.4	6.4	144.7	7.5	145.1	6.8	140.7	5.5	135.8	4.9	270.3	6.8					550
600	155.5	5.7	147.3	6.8	149.8	6.2	147.4	5.8	141.0	5.0							600
650	155.3	5.6	151.2	6.2	152.2	5.6	151.7	6.0	146.1	5.0							650
700	161.0	4.1	155.6	5.6	155.2	5.0	153.3	6.2	149.9	4.9							700
750	164.9	3.9	158.6	5.3	161.7	4.7	157.3	5.8	152.1	4.8							750
800	166.2	4.4	161.1	5.2	163.0	4.8	161.6	5.4	159.7	4.6							800
850	167.3	4.9	163.2	5.2	163.0	5.1	164.8	5.2	163.6	4.6							850
900	168.5	5.0	170.8	3.8	162.1	5.1	165.5	5.4	165.8	4.6							900
950	170.8	4.0	166.9	4.0	171.8	4.1	169.4	4.7	170.4	4.6							950
1000	174.1	4.2	163.1	4.4	190.4	3.1	173.1	4.4	171.0	5.2							1000
1050	177.6	4.4	172.4	3.0	176.1	3.7	173.2	4.6	173.2	5.4							1050
1100	181.8	4.3	174.4	3.6	174.9	4.0	170.8	4.8	176.0	5.2							1100
1150	190.8	3.9	184.6	3.4	185.5	3.6	174.6	4.3	179.0	4.8							1150
1200	200.1	3.4			190.3	3.6	176.7	4.1	181.2	4.2							1200
1250	196.4	3.6			190.4	3.8	177.5	4.0	178.5	4.3							1250
1300	189.5	4.0			189.4	4.1	181.3	4.0	176.9	4.5							1300
1350	182.8	4.4			214.2	2.8			176.3	4.8							1350
1400									175.9	5.0							1400

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 26 Oct 68 0700 EST Double		Ascn #K-2 26 Oct 68 0730 EST Combined		Ascn #K-3 26 Oct 68 0800 EST Double		Ascn #K-4 26 Oct 68 0830 EST Double		Ascn #K-5 26 Oct 68 0900 EST Double		Ascn #K-6 26 Oct 68 0930 EST Double		Ascn #K-1 29 Oct 68 1145 EST Combined		Ascn #K-2 29 Oct 68 1215 EST Single		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	Sfc
50	269.5	2.9	243.8	2.4	256.4	3.7	272.3	3.6	277.9	3.8	273.5	4.2	290.7	6.2	304.8	8.3	50
100	265.8	5.1	249.0	5.2	258.2	6.2	273.8	6.6	281.9	6.0	271.3	6.8	295.4	10.9	302.9	11.8	100
150	257.7	6.3	255.7	7.0	260.0	7.9	276.1	8.6	286.5	7.3	265.3	6.8	297.6	13.6	297.8	10.1	150
200	262.5	7.5	275.3	11.1	268.7	8.0	279.2	9.8	285.2	9.2	256.0	7.9	288.7	6.5	290.8	6.6	200
250	272.6	8.8	279.7	13.3	273.7	8.5	282.9	10.1	284.1	11.0	257.2	7.4	287.2	7.6	284.4	7.5	250
300	274.8	9.2	276.7	10.5	273.7	9.6	287.8	9.8	285.4	11.8	262.9	8.5	289.7	8.9	285.2	12.8	300
350	279.7	10.6			275.2	10.9	294.6	10.3	286.5	12.4	261.5	10.5	293.2	10.3	284.1	12.5	350
400	284.8	12.6			277.6	12.5			286.8	13.0	273.2	10.8	294.0	11.6	288.1	14.3	400
450	286.8	13.0			281.3	15.1			286.3	13.7	274.5	14.9	292.9	12.2	293.0	16.8	450
500	289.7	13.9							286.7	15.2	270.2	12.3	286.9	9.4	295.1	16.7	500
550									288.3	15.4	269.0	10.3	286.8	6.1	294.9	16.3	550
600											268.9	8.4	292.1	3.7	294.4	16.5	600
650											275.3	8.1	286.7	5.7	294.3	17.2	650
700											282.0	8.6	290.6	9.2	294.7	16.2	700
750											284.1	11.8			295.6	16.7	750
800											286.1	13.4			295.9	16.7	800
850											288.8	12.8			296.0	16.4	850
900											287.3	11.8			297.1	17.0	900
950											290.4	13.9			297.4	17.5	950
1000											293.1	16.3			298.4	18.2	1000
1050															299.7	18.8	1050
1100															300.9	19.6	1100
1150															300.4	20.3	1150

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-1 30 Oct 68 0800 EST Double		Ascn #K-2 30 Oct 68 0832 EST Combined		Ascn #K-3 30 Oct 68 0900 EST Double		Ascn #K-4 30 Oct 68 0930 EST Double		Ascn #K-5 30 Oct 68 1000 EST Double		Ascn #K-6 30 Oct 68 1030 EST Double		Ascn #K-7 30 Oct 68 1100 EST Double		Ascn #K-1 31 Oct 68 0730 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc	----	---	----	---		0.0	----	---	----	---	----	---	----	---		0.0	Sfc
50	269.5	2.9	282.1	1.8	280.6	1.4	288.5	2.7	302.3	2.0	309.1	1.9	313.0	1.7	080.4	0.5	50
100	270.7	4.0	279.0	3.3	275.6	2.3	289.4	4.2	300.2	3.3	305.9	2.5	310.8	3.1	101.0	1.1	100
150	273.2	4.3	269.7	3.7	272.7	2.9	291.1	4.5	297.6	4.1	301.5	2.7	308.4	4.2	116.2	1.8	150
200	284.5	5.9	273.3	4.9	275.7	3.6	292.9	4.7	296.9	4.5	293.4	2.9	318.3	3.6	157.3	2.2	200
250	293.3	6.7	278.1	6.1	278.8	4.5	294.7	4.7	297.3	4.5	284.7	3.2	325.6	3.9	164.4	2.3	250
300	298.8	7.5	285.0	7.1	281.4	5.6	291.7	4.6	299.5	4.4	283.1	3.7	326.5	4.7	170.7	1.9	300
350	297.7	9.6	291.9	7.3	290.8	5.9	287.1	4.4	307.4	4.2	284.4	4.3	326.6	4.9	184.4	1.4	350
400	300.5	9.2	301.5	7.0	297.0	6.4	278.8	4.4	310.4	4.4	289.0	4.7	323.2	3.2	200.1	1.2	400
450	304.3	8.4	305.3	7.0	305.2	6.3	274.2	4.4	306.3	5.3	294.6	5.2			230.3	1.4	450
500	304.1	9.0	303.9	7.8	301.6	9.3	282.4	4.7	308.9	5.9	296.0	6.2			265.1	1.9	500
550	302.8	7.5	301.6	7.9	303.4	9.6	286.0	5.3	313.5	6.4	295.9	7.5			282.1	2.7	550
600	302.9	8.1	299.4	7.6	304.5	9.0			308.3	7.2					285.5	3.3	600
650	304.1	8.5	298.7	8.6	303.0	8.6									297.8	3.9	650
700	309.4	6.1	297.8	9.2	301.7	8.1									299.4	3.9	700
750	312.1	7.0	295.7	9.9	299.4	7.8									298.6	3.9	750
800	312.7	7.2	295.5	9.2											296.8	4.1	800
850	313.3	7.4	297.7	8.2											295.5	4.4	850
900			300.4	8.9											296.1	4.5	900
950															301.1	4.3	950
1000															301.5	4.5	1000
1050															304.1	6.3	1050
1100															304.9	8.0	1100
1150															299.6	8.3	1150
1200															299.0	7.4	1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-2 31 Oct 68 0800 EST Combined D(°)	S(mps)	Ascn #K-3 31 Oct 68 0830 EST Combined D(°)	S(mps)	Ascn #K-4 31 Oct 68 0900 EST Double D(°)	S(mps)	Ascn #K-5 31 Oct 68 0930 EST Combined D(°)	S(mps)	Ascn #K-6 31 Oct 68 1000 EST Single D(°)	S(mps)	Ascn #K-7 31 Oct 68 1030 EST Single D(°)	S(mps)	Ascn #K-8 31 Oct 68 1100 EST Single D(°)	S(mps)	Ascn #K-9 31 Oct 68 1130 EST Single D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0		0.0		0.0	Sfc
50	035.0	0.7	046.6	0.7	072.0	0.4	057.7	0.7	058.8	0.3	267.0	0.6	216.7	0.6	148.8	0.6	50
100	058.5	0.9	059.4	1.2	085.3	1.1	069.8	1.3	077.3	0.8	235.6	0.8	205.9	1.2	170.4	1.0	100
150	138.2	1.5	145.8	1.6	117.0	1.5	092.5	1.4	087.5	1.7	187.3	1.3	194.7	1.9	197.5	1.5	150
200	151.4	2.4	158.0	2.4	145.3	2.1	143.1	1.7	119.3	1.7	183.4	2.8	197.9	2.8	203.9	1.5	200
250	156.2	2.4	164.7	2.6	160.0	2.7	166.7	2.3	146.9	1.9	184.9	3.6	202.4	3.3	205.9	1.6	250
300	172.5	1.8	175.1	2.5	166.7	2.9	167.4	2.3	167.4	2.3	188.8	3.8	208.6	3.5	203.7	1.8	300
350	178.0	1.5	180.5	2.2	176.1	2.4	172.7	1.5	171.1	2.1	190.1	3.0	207.5	3.7	205.4	1.9	350
400	211.3	1.2	206.9	1.4	181.7	1.4	205.4	0.5	174.6	1.5	196.2	2.7	212.2	3.9	211.9	2.0	400
450	267.0	1.2	249.2	1.0	231.2	0.6	286.9	0.6	193.8	0.7	206.7	2.8	218.9	4.0	221.4	1.9	450
500	282.9	1.8	274.4	1.7	270.8	1.4	263.4	1.5	240.9	1.0	220.6	3.1	221.7	3.5	228.6	1.9	500
550	286.5	2.6	282.6	2.4	268.0	2.0	266.3	2.0	250.2	2.0	227.0	3.4	219.6	3.1	221.6	1.4	550
600	294.1	3.3	293.6	2.7	277.8	2.4	278.8	2.1	256.2	2.5	233.7	3.1	216.3	3.0	211.1	1.4	600
650	302.9	3.4	306.2	2.9	288.1	2.5	291.9	2.0	267.6	2.5	243.0	2.6	214.0	3.2	207.8	1.7	650
700	305.9	3.2	302.6	2.9	294.7	2.6	299.3	1.9	289.6	2.3	239.1	2.2	211.7	3.7	202.7	1.6	700
750	305.4	3.6	298.9	2.7	296.1	2.5	300.7	1.8	294.7	1.8	238.4	1.9	207.0	4.2	206.2	1.6	750
800	299.0	3.5	294.9	3.0	291.4	2.2	295.1	1.7	294.2	1.6	230.5	2.2	208.1	4.1	238.0	1.9	800
850	297.3	3.2	296.8	3.2	296.6	2.3	297.0	2.0	288.4	1.7	226.9	2.7	213.5	3.4	269.0	3.0	850
900	302.9	3.8	308.4	3.4	312.1	2.6	311.8	2.2	274.7	1.8	239.7	2.3	218.6	2.1	288.0	4.4	900
950	314.0	4.5	318.0	3.7	317.1	3.1	328.6	2.4	285.9	2.1	243.5	1.5	194.3	1.3	289.5	4.7	950
1000	306.7	5.6			301.9	4.1	329.5	2.6	308.6	2.0	228.5	0.8	177.2	1.1	285.4	5.3	1000
1050					291.6	5.9	300.0	3.8	326.3	1.9	241.9	1.2	213.8	1.3	282.4	6.1	1050
1100					294.5	6.1	295.1	5.2	319.3	1.6	261.7	3.3	247.6	2.8			1100
1150					295.4	6.5	296.5	5.7	286.5	3.0	278.0	5.3	271.9	4.5			1150
1200					290.7	6.3	297.4	5.8	282.3	4.6	281.3	5.9	279.2	5.5			1200
1250									286.4	5.2			279.8	6.2			1250
1300									292.8	5.2			278.0	6.9			1300
1350									292.9	6.0			277.8	7.4			1350

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-10 31 Oct 68 1200 EST Single		Ascn #K-11 31 Oct 68 1230 EST Double		Ascn #K-1 1 Nov 68 0730 EST Double		Ascn #K-2 1 Nov 68 0800 EST Combined		Ascn #K-3 1 Nov 68 0830 EST Combined		Ascn #K-4 1 Nov 68 0900 EST Double		Ascn #K-5 1 Nov 68 0930 EST Single		Ascn #K-6 1 Nov 68 1000 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0		0.0		0.0		0.0		0.0		0.0	----	---		0.0	Sfc
50	178.9	0.6		0.0	104.9	0.3	015.6	0.5	149.0	0.1	057.3	0.2	----	---	140.1	0.3	50
100	172.5	1.0	153.1	0.6	174.2	1.4	181.5	1.9	194.3	2.2	195.0	2.7	214.2	1.2	200.4	1.4	100
150	163.8	1.4	155.3	1.7	197.8	3.4	201.0	4.6	207.0	4.7	206.0	5.2	214.2	3.9	220.8	2.9	150
200	201.8	0.6	159.3	2.0	213.1	6.3	216.1	6.9	219.9	7.4	221.1	6.0	233.2	5.2	244.9	4.1	200
250	244.8	0.7	163.8	2.2	223.2	9.6	232.8	8.4	234.4	8.3			243.9	7.3	255.8	6.8	250
300	235.2	1.0	167.8	2.3	238.4	10.1	242.3	9.7	242.4	10.2			249.2	9.8	253.6	8.4	300
350	202.5	1.1	171.3	2.5	251.4	12.4	250.1	12.2	249.3	12.1			251.6	11.9	252.7	10.0	350
400	196.9	1.0	189.6	2.6	258.1	12.7	259.4	12.9	262.5	13.4			254.1	13.0	254.1	11.4	400
450	215.8	0.8	198.4	2.8	262.5	11.9							256.9	13.5	254.8	12.6	450
500	266.3	0.9	200.6	2.9	265.4	12.2							259.9	13.4	254.8	13.3	500
550	271.7	1.9	203.6	2.8	271.6	10.3							265.0	13.3	256.8	10.8	550
600	274.3	3.0	209.2	2.8	275.6	9.8							268.1	12.2	259.6	10.9	600
650	276.7	4.1	215.6	3.0	275.2	9.5							269.0	10.1			650
700	274.2	4.9	246.8	3.6	272.6	9.0							271.6	9.3			700
750	284.3	5.0	260.0	4.3	271.5	8.1							275.4	8.2			750
800			261.4	4.0	270.7	7.8											800
850			267.1	3.7	272.1	7.2											850
900			278.2	3.6	275.3	6.5											900
950			280.7	5.1	275.2	7.0											950
1000			281.3	6.5	275.2	7.7											1000
1050			285.9	6.9													1050
1100			285.4	7.1													1100
1150			282.5	7.7													1150

Table 9 (continued). PILOT BALLOON MEASUREMENTS

	Ascn #K-7 1 Nov 68 1030 EST Double		Ascn #K-8 1 Nov 68 1100 EST Double		Ascn #K-9 1 Nov 68 1130 EST Combined		Ascn #K-10 1 Nov 68 1200 EST Double		Ascn #K-1 2 Nov 68 0800 EST Double		Ascn #K-2 2 Nov 68 0830 EST Combined		Ascn #K-3 2 Nov 68 0900 EST Double		Ascn #K-4 2 Nov 68 1000 EST Double		
Z(m)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	D(°)	S(mps)	Z(m)
Sfc		0.0	----	---	----	---	----	---	----	---		0.0	----	---	----	---	Sfc
50	093.4	0.9	239.9	3.3	239.0	2.3	258.2	2.1	236.9	1.7	244.8	0.8	269.7	4.4	286.2	3.6	50
100	179.9	1.3	235.6	4.5	239.0	4.5	258.2	4.3	240.7	2.8	244.8	1.7	258.1	6.5	274.5	5.3	100
150	207.8	2.2	232.1	4.8	235.0	5.2	251.8	4.7	247.5	3.2	245.1	6.2	237.6	7.2	250.0	5.6	150
200	224.2	2.8	232.4	5.4	230.8	5.4	246.1	5.1	255.4	4.7	256.8	7.5	238.4	6.4	248.4	6.7	200
250	233.3	4.0	233.4	6.8	237.7	4.5	239.2	5.7	260.5	7.3	273.0	7.4	257.6	5.1	250.2	7.5	250
300	237.8	5.5	233.0	6.2	240.4	4.9	234.7	6.3	266.9	8.8	270.7	9.2	258.7	7.2	253.6	7.9	300
350	241.2	6.1	231.6	4.5	240.7	5.9	236.8	6.0	272.3	9.7	272.9	9.0	263.3	7.3	256.0	6.8	350
400	245.2	7.0	231.5	5.6	241.0	6.9	237.3	6.1	276.4	9.7	275.4	9.1	264.6	7.9	258.7	5.8	400
450	249.6	9.4	229.3	6.0	243.5	6.8	236.1	6.5	278.4	9.7	277.2	9.6	263.8	9.1	255.4	6.2	450
500	251.3	11.7	227.7	6.4	247.0	6.5	233.1	7.9			284.1	11.2	270.5	10.0	251.1	5.9	500
550			229.3	7.0	247.9	6.6	230.8	9.6			286.7	11.4	271.8	12.0	246.3	6.5	550
600			237.0	8.0	247.3	7.0	228.7	9.5			285.7	11.8	280.0	8.9	248.1	6.8	600
650			242.0	10.1	247.6	15.5	228.0	8.1			284.0	12.6	286.6	8.1	250.5	7.4	650
700			246.9	11.1	246.2	7.5					285.1	12.1			251.8	7.8	700
750			247.6	8.7	244.1	8.3											750
800			241.9	8.8	238.6	9.3											800
850			241.2	8.6	237.3	9.5											850
900					238.5	9.6											900
950					239.6	10.3											950
1000					240.9	10.5											1000
1050					243.3	9.9											1050
1100					245.6	11.0											1100
1150					245.5	14.5											1150
1200					248.8	15.0											1200

Table 9 (continued). PILOT BALLOON MEASUREMENTS

Z(m)	Ascn #K-5 2 Nov 68 1030 EST Combined D(°)	S(mps)	Ascn #K-6 2 Nov 68 1100 EST Double D(°)	S(mps)	Ascn #K-7 2 Nov 68 1130 EST Single D(°)	S(mps)	Ascn #K-8 2 Nov 68 1200 EST Single D(°)	S(mps)	Z(m)
Sfc	----	---	----	---	----	---	----	---	Sfc
50	249.2	7.0	257.4	2.8	258.8	2.3	----	---	50
100	247.3	7.5	256.5	5.0	259.3	4.6	----	---	100
150	249.4	8.2	252.6	5.2	270.3	5.7	289.9	10.0	150
200	246.6	8.0	250.0	5.5	269.0	6.3	274.0	10.1	200
250	246.7	7.8	252.4	6.3	267.4	6.3	260.5	9.5	250
300	246.8	7.7	254.3	3.5	267.8	6.0	239.2	7.9	300
350	247.8	7.7	254.6	4.1	269.7	5.6	212.7	6.2	350
400	247.5	7.1	255.2	4.7	270.7	5.1	233.2	6.2	400
450	248.1	6.3	256.3	5.2	272.6	4.7	262.0	8.6	450
500	251.7	5.6	257.6	5.8	275.4	4.3	257.3	6.6	500
550	263.9	4.5	259.0	6.4	278.9	3.9			550
600	275.9	3.9	262.1	6.8	283.1	3.5			600
650	277.7	4.1	267.1	6.5	288.3	3.1			650
700	273.6	5.2	268.7	6.5	294.7	2.8			700
750	269.6	6.0	267.1	7.1	302.8	2.5			750
800	265.1	6.7							800
850	260.1	11.6							850
900	258.6	8.4							900
950	269.4	7.8							950
1000	277.5	11.3							1000

RADIOSONDE MEASUREMENTS

Radiosonde observations taken at Jimmy Stewart Airport are presented in Table 10. On most experiment days, two releases were effected, one prior to and the other following the airborne activities. In addition, a single early morning radiosonde was occasionally released on days during which the weather proved too restrictive for flying; these are also included in this table.

The pressure, temperature, dewpoint, and height above MSL of each mandatory and significant level up to 700 millibars are given for each radiosonde in Table 10. The accompanying rabal wind speeds and directions are listed for fixed heights, i.e., surface, 150 and 300 meters above surface, and 500, 1000, 1500, 2000, 2500, and 3000 meters MSL. Elevation of the release site is 428 meters MSL.

Table 10. RADIOSONDE MEASUREMENTS

Symbols

Ascn #	:	Individual ascension or radiosonde designation.
EST	:	Release time of radiosonde.
P (mb)	:	Mandatory and significant pressure levels in whole millibars.
Z (m)	:	Height of each level in whole meters above mean sea level.
T (°C)	:	Drybulb temperature to nearest tenth degree Centigrade.
Td (°C)	:	Dewpoint temperature to nearest tenth degree Centigrade.
H (m)	:	Surface, 150 and 300 meters above surface in whole meters. Remaining heights in whole meters above mean sea level.
D (°)	:	Wind direction in whole degrees of azimuth.
S (mps)	:	Wind speed to nearest tenth meter per second.
Sfc	:	Surface wind direction and speed from Aerovane.
---	:	Missing data.

Table 10. RADIOSONDE MEASUREMENTS

Ascn #23 14 March 1968 1200 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	285					
982	428	- 3.4	-13.6	Sfc	235	5.4
950	688	- 5.1	----	150	192	5.3
942	755	- 5.6	----	300	190	8.0
910	1024	- 8.4	----			
900	1110	- 9.4	----	500	194	9.0
882	1265	-10.8	----	1000	191	10.0
852	1531	-11.0	----	1500	249	7.2
850	1549	-10.8	----	2000	250	11.1
844	1604	- 9.3	----			
812	1902	-10.3	----			
800	2017	-10.3	----			
782	2192	-10.2	----			

Ascn #24 15 March 1968 0604 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	257					
979	428	2.6	- 7.8	Sfc	145	5.4
950	671	4.6	- 8.5			
940	757	5.3	- 8.2			
924	897	3.6	- 9.4			
917	959	2.7	- 9.9			
900	1110	2.1	-10.7			
878	1309	1.3	-11.8			
850	1568	- 1.5	-12.4			
835	1710	- 2.8	-12.8			
805	1988	- 4.9	-18.0			
800	2047	- 4.6	-17.8			
767	2380	- 3.3	-16.6			
758	2473	- 3.4	----			

Ascn #25 15 March 1968 1232 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	245					
978	428	11.0	7.7	Sfc	215	6.3
950	668	8.8	----	150	284	5.8
900	1112	5.0	----	300	287	8.1
850	1574	0.7	----			
824	1822	- 1.4	----	500	236	6.7
804	2018	- 1.0	----	1000	288	8.9
800	2058	- 1.2	----	1500	290	9.0
775	2310	- 2.0	----			
750	2571	- 2.1	----			
706	3051	- 2.4	----			
700	3119	- 3.6	----			

Ascn #26 16 March 1968 0550 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	220					
975	428	6.4	0.3	Sfc	145	4.9
950	640	6.8	0.9			
913	966	7.3	2.0			
900	1084	7.3	1.3			
898	1102	7.3	1.3			
856	1494	3.9	- 1.2			
850	1551	3.4	- 1.1			
840	1646	2.9	- 0.9			
800	2039	- 0.7	- 2.1			
771	2332	- 3.2	- 3.2			
750	2550	- 5.0	- 5.0			
700	3088	- 9.3	- 9.3			

Ascn #27 16 March 1968 1000 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	220					
974	428	7.2	5.8	Sfc	165	3.1
950	632	7.4	----	150	235	5.2
937	746	7.6	----	300	259	10.6
906	1021	5.6	----			
900	1076	5.2	----	500	189	4.8
865	1398	3.5	----	1000	271	16.9
850	1540	2.5	----			
823	1800	0.9	----			
800	2027	0.0	----			
770	2332	- 1.3	----			
750	2541	- 2.6	----			
700	3085	- 5.8	----			

Ascn #28 18 March 1968 0555 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	217					
974	428	- 1.4	----	Sfc	300	1.8
950	626	- 1.4	----	150	214	5.4
920	881	- 1.4	----	300	231	8.4
900	1058	2.2	----			
892	1130	3.6	----	500	200	2.6
850	1521	3.4	----	1000	275	16.6
820	1812	3.1	----	1500	273	26.0
800	2011	1.8	----			
768	2338	- 0.5	----			
750	2528	- 1.7	----			
700	3073	- 5.4	----			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #29 18 March 1968 1225 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	207					
973	428	11.7	5.1	Sfc	360	4.5
950	626	9.1	----	150	064	6.3
900	1069	3.6	----	300	064	8.5
899	1078	3.5	----			
850	1530	1.2	----	500	064	2.8
846	1568	1.1	----	1000	071	12.1
840	1625	1.7	----	1500	099	15.8
820	1819	1.4	----	2000	084	27.1
800	2018	1.3	----			
787	2150	1.3	----			
772	2304	0.6	----			
752	2514	- 1.4	----			
750	2535	- 1.6	----			

Ascn #30 19 March 1968 0555 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	209					
973	428	- 1.5	- 1.7	Sfc		0.0
967	477	4.5	----	150	118	2.8
953	597	8.2	----	300	114	4.8
950	623	8.2	----			
900	1068	8.3	----	500	146	1.6
895	1114	8.3	----			
867	1375	6.4	----			
851	1528	8.5	----			
850	1538	8.5	----			
830	1735	8.3	----			
800	2038	7.3	----			
790	2141	6.9	----			
750	2565	4.1	----			
740	2674	3.4	----			
700	3122	- 0.1	----			

Ascn #31 19 March 1968 1117 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	203					
973	428	10.2	5.6	Sfc	240	2.2
950	625	7.5	----	150	186	1.9
948	642	7.3	----	300	171	3.2
903	1042	7.5	----			
900	1069	7.5	----	500	187	1.0
876	1291	6.9	----	1000	214	2.8
850	1539	8.6	----	1500	246	2.8
835	1686	9.6	----	2000	287	5.7
800	2040	7.4	----	2500	294	3.7
781	2237	6.0	----	3000	266	6.8
757	2492	5.1	----			
750	2568	4.5	----			
700	3125	0.4	----			

Ascn #32 20 March 1968 0537 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	150					
967	428	8.9	1.5	Sfc		0.0
952	557	11.6	4.6	150	279	4.7
950	575	11.6	4.8	300	283	8.2
932	734	11.8	5.2			
900	1025	10.0	4.1	500	254	2.3
860	1401	7.8	2.6	1000	284	10.9
850	1497	7.3	3.3	1500	308	14.0
816	1831	5.8	5.8			
804	1952	5.3	5.8			

Ascn #33 20 March 1968 0946 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	147					
967	428	10.2	- 5.3	Sfc		0.0
950	575	10.3	- 1.7	150	273	5.5
940	663	10.4	0.4	300	280	9.3
908	950	10.4	4.5			
900	1024	10.0	5.0	500	279	2.0
866	1342	8.4	6.9	1000	302	14.8
850	1496	8.0	6.6	1500	312	14.8
824	1751	7.3	6.4			
800	1994	7.3	7.2			
796	2036	7.3	7.3			
750	2522	3.6	2.1			
728	2762	1.8	- 0.2			
700	3077	- 0.7	- 4.7			

Ascn #34 23 March 1968 0820 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	58					
955	428	- 2.5	- 6.0	Sfc	245	10.3
950	469	- 2.7	- 5.6	150	310	7.9
924	688	- 4.9	- 5.8	300	310	7.9
900	894	- 6.1	- 6.6			
853	1312	- 8.7	- 8.7	500	316	8.5
850	1339	- 8.9	- 8.9			
800	1806	-11.3	-11.3			
798	1825	-11.4	-11.4			
776	2041	- 7.8	-12.5			
750	2306	- 8.3	-11.9			
737	2442	- 8.5	-11.8			
700	2841	- 9.4	-12.2			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #35 25 March 1968 0555 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	196					
971	428	- 5.7	- 7.5	Sfc		0.0
950	599	- 4.2	- 6.3	150	293	7.1
937	708	- 1.8	- 4.4	300	306	9.1
907	966	- 3.2	- 5.7			
900	1027	- 3.4	- 6.3	500	280	3.5
867	1322	- 4.5	----	1000	322	9.1
852	1459	- 6.2	-12.7	1500	343	11.5
850	1477	- 5.9	-13.7	2000	014	15.3
834	1626	- 4.5	-18.4			
800	1954	- 5.4	-23.3			
796	1993	- 5.5	-23.9			
750	2460	- 5.5	-13.8			
737	2597	- 5.5	-11.8			
711	2878	- 6.3	-13.6			
700	3000	- 6.6	-18.6			

Ascn #36 25 March 1968 1248 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	189					
971	428	7.4	1.6	Sfc	240	4.5
950	607	5.8	- 1.1	150	267	3.3
902	1028	2.4	- 7.7	300	251	2.6
900	1046	2.3	- 7.6			
860	1411	- 0.7	- 7.1	500	245	3.7
850	1504	- 0.7	-10.9	1000	299	5.1
845	1551	- 0.8	-12.7	1500	340	7.1
836	1636	- 0.5	-12.1	2000	355	9.1
818	1810	- 1.5	-15.7			
800	1987	- 0.7	-19.8			
792	2068	- 0.5	-21.9			
766	2334	- 0.8	-15.8			

Ascn #37 26 March 1968 0540 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	189					
971	428	2.0	- 9.9	Sfc	140	2.2
956	555	9.3	- 5.3	150	252	6.6
950	607	8.5	- 6.4	300	270	10.9
936	729	7.2	- 9.2			
920	871	8.4	- 9.0	500	225	3.4
900	1052	7.0	- 9.8	1000	286	8.9
850	1518	3.5	-11.6			
812	1887	0.9	-12.8			
800	2006	0.5	-13.5			
786	2148	0.1	-14.3			
750	2521	- 2.5	-15.5			
748	2543	- 2.7	-15.7			
723	2811	- 4.5	-17.3			
700	3064	- 7.0	-18.6			

Ascn #38 27 March 1968 0542 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	208					
974	428	10.8	9.9	Sfc	230	1.8
950	635	10.2	----			
937	749	9.9	----			
900	1083	9.4	----			
850	1553	6.1	----			
849	1563	6.0	----			
808	1965	2.0	----			
800	2045	1.4	----			
775	2299	- 0.4	----			
750	2560	- 2.6	----			
737	2699	- 4.0	----			
710	2993	- 3.6	----			
700	3105	- 4.1	----			

Ascn #39 27 March 1968 1200 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	220					
976	428	17.9	0.1	Sfc	255	4.5
950	657	15.1	0.5			
920	926	12.0	0.7			
900	1109	10.0	0.8			
872	1370	7.1	0.3			
850	1579	5.5	0.0			
843	1646	5.0	0.1			
806	2011	3.5	- 7.0			
800	2072	3.0	- 8.3			
758	2506	0.5	-19.9			
750	2591	- 0.1	-20.4			
734	2763	- 1.5	-22.2			
712	3005	- 3.4	-25.0			
700	3139	- 3.4	-25.0			

Ascn #40 28 March 1968 0553 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	191					
972	428	10.8	----	Sfc		0.0
954	584	13.5	----	150	244	5.4
950	619	13.5	----	300	239	10.5
914	943	13.5	----			
900	1073	12.8	----	500	252	1.2
875	1308	11.5	----	1000	240	14.6
850	1549	9.2	----	1500	252	20.2
802	2026	4.7	----	2000	260	3.7
800	2046	4.4	----	2500	260	12.1
784	2210	3.5	----			
750	2568	0.0	----			
747	2600	- 0.3	----			
729	2794	- 1.7	----			
700	3116	- 4.0	----			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #41 28 March 1968 1153 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	169					
970	428	18.1	6.9	Sfc	230	8.5
950	605	16.8	5.4	150	233	10.7
914	931	14.3	2.8	300	227	11.3
900	1061	13.1	2.6			
850	1537	8.6	1.2	500	234	11.5
843	1605	8.1	1.0	1000	233	15.5
810	1931	3.8	0.8	1500	240	13.4
800	2032	3.2	0.4	2000	242	21.0
775	2289	1.7	- 0.3			
750	2552	0.0	- 3.7			
740	2659	- 0.5	- 4.7			
729	2778	- 3.9	- 9.7			
725	2822	- 3.9	-17.1			
716	2921	1.1	-13.4			
700	3103	0.8	-13.6			

Ascn #42 29 March 1968 0552 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	147					
967	428	12.1	8.6	Sfc	220	4.0
954	541	12.8	8.7	150	219	8.4
950	576	12.6	8.5	300	231	12.1
935	709	12.2	8.1			
900	1027	11.0	8.1	500	217	5.4
877	1242	10.2	7.8	1000	272	13.8
854	1463	9.1	5.3	1500	276	19.7
850	1501	8.9	3.9			
822	1777	7.4	- 4.6			
800	2000	5.7	- 6.5			
796	2041	5.5	- 6.7			
750	2523	1.1	- 7.1			
718	2871	- 2.0	- 7.9			
700	3073	- 3.8	- 9.4			

Ascn #43 29 March 1968 1158 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	114					
964	428	20.6	7.9	Sfc	240	8.5
950	553	19.2	7.0	150	235	8.6
936	680	17.9	6.1	300	240	12.0
920	827	17.2	6.1			
900	1013	15.2	4.8	500	234	7.6
878	1221	12.9	3.8	1000	230	8.6
850	1491	10.2	3.0	1500	251	11.4
826	1728	8.0	2.4	2000	262	12.4
800	1991	6.1	- 2.2			
770	2303	4.1	- 7.6			
750	2516	3.5	-16.8			
740	2625	3.0	-16.6			
700	3072	- 0.7	-20.3			

Ascn #44 30 March 1968 0552 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	173					
969	428	- 1.2	- 2.3	Sfc		0.0
966	452	4.2	0.5	150	350	1.3
951	580	6.1	- 4.6	300	001	4.2
950	589	6.0	- 4.7			
921	842	5.4	-12.6	500	266	0.4
900	1030	4.0	-12.9	1000	357	10.5
892	1102	3.5	-13.3	1500	359	19.3
865	1350	1.5	-13.0	2000	320	15.4
850	1491	1.0	-13.8	2500	310	9.8
842	1567	0.8	-14.0			
812	1857	- 0.5	-18.1			
800	1977	1.3	-16.6			
799	1987	1.4	-16.5			
756	2430	- 0.6	-18.7			
750	2494	- 1.0	-18.6			
700	3041	- 3.6	-20.8			

Ascn #45 30 March 1968 1201 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	185					
971	428	12.1	- 6.8	Sfc		0.0
956	557	11.8	- 8.6	150	002	1.0
950	610	11.0	- 9.3	300	026	0.7
936	733	9.8	-10.9			
900	1056	6.2	-11.4	500	002	0.5
852	1501	1.8	-12.8	1000	057	1.3
850	1520	2.0	-13.4	1500	294	2.7
826	1752	4.4	-17.9	2000	309	9.8
802	1992	4.1	-18.8	2500	310	14.3
800	2012	3.7	-18.4			
758	2448	1.0	-19.5			
750	2533	- 1.3	-20.8			
714	2925	- 2.8	-20.1			
700	3081	- 3.6	-20.8			

Ascn #46 1 April 1968 0558 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	163					
968	428	0.4	- 3.5	Sfc	290	7.2
952	561	- 0.3	- 3.8	150	323	6.6
950	578	- 0.6	- 4.1	300	325	9.4
900	1006	- 4.5	- 7.6			
876	1218	- 6.5	- 9.4	500	301	6.6
850	1454	- 4.8	-21.4	1000	338	15.3
848	1473	- 4.7	-21.7			
828	1660	- 5.5	-22.0			
814	1794	- 4.7	-21.7			
802	1911	- 3.4	-20.2			
800	1931	- 3.4	-20.2			
755	2389	- 3.4	-20.6			
750	2441	- 3.0	-19.8			
723	2733	- 0.5	-18.6			
700	2991	- 1.7	-18.7			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #47 2 April 1968 0548 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	255					
978	428	- 4.2	-10.4	Sfc		0.0
968	509	0.0	- 9.7	150	226	4.7
950	659	- 0.9	-13.8	300	262	5.5
946	693	- 1.0	-14.9			
907	1028	- 1.9	-14.3	500	205	1.8
900	1089	- 2.8	-15.1	1000	310	5.8
886	1213	- 4.3	-15.6	1500	336	7.8
858	1466	- 4.0	-16.6			
850	1540	- 4.5	-17.0			
845	1586	- 4.8	-17.0			
800	2015	- 7.0	-20.9			
771	2302	- 8.5	-23.4			
750	2516	- 8.5	-22.3			
700	3049	-11.0	-19.0			

Ascn #48 3 April 1968 0552 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	182					
970	428	4.4	- 5.6	Sfc	110	0.9
950	599	10.8	- 8.4	150	187	2.9
932	758	9.9	- 9.7	300	214	4.2
914	919	8.0	-10.8			
900	1046	7.6	-11.2	500	145	1.6
888	1156	7.4	-11.3	1000	240	2.3
850	1514	5.3	- 8.5	1500	285	6.8
847	1543	5.0	- 8.1	2000	278	6.5
814	1865	2.0	- 6.1	2500	245	8.3
802	1985	2.0	- 7.3			
800	2005	1.9	- 7.1			
765	2364	- 0.2	- 5.8			
750	2522	- 1.4	- 7.3			
700	3068	- 5.0	-12.2			

Ascn #49 3 April 1968 1154 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	162					
969	428	18.0	- 3.4	Sfc	190	2.2
950	596	16.1	- 5.0	150	166	1.2
911	949	12.3	- 7.7	300	203	2.7
900	1050	11.3	- 8.5			
854	1484	7.2	-10.1	500	156	1.6
850	1523	6.8	-10.4	1000	179	3.1
805	1966	2.7	-13.1	1500	166	5.1
800	2016	2.4	-12.2	2000	161	9.8
757	2461	0.7	- 4.7	2500	221	10.2
750	2535	0.3	- 5.9			
731	2741	- 0.3	- 8.0			
700	3086	- 2.0	- 8.3			

Ascn #50 4 April 1968 0550 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	72					
959	428	15.7	8.7	Sfc	180	7.2
950	507	16.4	9.4	150	192	7.8
935	642	17.3	10.2	300	204	13.9
900	966	14.6	8.3			
885	1107	13.3	7.5	500	181	6.3
850	1445	11.9	8.6	1000	214	22.8
843	1514	11.6	8.8	1500	239	35.5
804	1909	11.4	6.3			
800	1950	11.0	6.3			
750	2483	6.5	4.8			
718	2839	3.6	3.6			
700	3044	2.3	2.3			

Ascn #51 5 April 1968 0610 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	121					
964	428	3.6	- 1.1	Sfc	260	8.9
950	546	3.0	- 1.3	150	275	9.1
936	665	1.5	- 2.4	300	276	14.8
900	979	- 1.8	- 3.6			
893	1041	- 2.5	- 3.6	500	267	8.2
850	1431	- 5.0	- 5.5	1000	277	17.7
819	1721	- 7.0	- 7.0	1500	279	20.0
800	1905	- 5.0	- 6.5			
792	1984	- 4.2	- 6.3			
750	2412	- 5.9	-11.6			
744	2475	- 6.2	-12.1			
700	2954	- 4.2	-19.2			

Ascn #52 5 May 1968 0455 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
958	428	- 1.0	- 2.7	Sfc	335	4.5
950	494	0.2	- 3.5			
941	571	1.8	- 3.8			
918	771	5.2	- 1.4			
900	932	3.4	- 3.8			
892	1005	2.8	- 4.6			
876	1151	4.5	- 3.5			
850	1396	3.0	- 4.0			
813	1755	0.9	- 4.1			
800	1884	- 0.2	- 4.2			
750	2395	- 4.9	- 6.1			
729	2618	- 7.0	- 7.0			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #53 5 May 1968 1055 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
961	428	7.0	1.7	Sfc	020	2.7
950	522	6.1	1.4	150	022	4.3
912	854	3.2	0.7	300	021	6.4
900	961	2.6	0.5			
851	1411	0.2	- 0.6	500	040	3.0
850	1421	0.1	- 0.7	1000	015	5.6
810	1805	- 2.6	- 4.0			
800	1903	- 3.0	- 4.4			
750	2415	- 5.5	- 6.9			
748	2436	- 5.7	- 7.1			
700	2953	- 8.4	-11.2			

Ascn #54 6 May 1968 0525 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
970	428	- 4.1	-13.7	Sfc	190	1.3
955	551	- 2.4	- 8.5	150	317	1.4
950	592	- 2.5	- 8.2	300	285	0.3
934	727	- 3.1	- 7.8			
916	881	- 1.9	- 5.9	500	240	1.0
900	1021	- 3.1	- 6.7	1000	337	5.9
876	1234	- 4.9	- 8.3	1500	328	7.2
850	1470	- 7.0	-10.5			
846	1507	- 7.2	-10.9			
812	1824	-10.8	-12.3			
800	1938	-10.6	-18.8			
793	2006	-10.4	-24.3			
753	2404	-11.0	-25.2			
750	2435	-11.1	-24.9			
716	2791	-11.8	-23.3			

Ascn #55 6 May 1968 1110 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
973	428	6.3	-12.8	Sfc	345	5.4
950	623	4.2	-12.2	150	352	5.4
934	760	2.7	-12.3	300	348	7.2
900	1058	0.0	-13.3			
880	1238	- 1.7	-13.8	500	350	4.9
850	1512	- 3.6	-17.9	1000	343	5.4
840	1606	- 4.3	-19.3	1500	331	5.4
800	1988	- 7.1	-25.8	2000	320	9.6
790	2086	- 8.0	-27.6	2500	333	8.6
767	2316	- 7.8	-26.9			
750	2489	- 8.8	-28.9			
720	2804	-11.0	-30.7			
700	3020	-12.5	-32.0			

Ascn #56 7 May 1968 0500 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
979	428	- 3.5	-16.4	Sfc	080	1.8
962	567	1.4	-11.4			
950	668	1.4	-12.0			
916	961	1.4	-12.7			
900	1102	0.0	-13.0			
861	1455	- 3.4	-13.9			
850	1556	- 3.2	-15.2			
813	1909	- 2.5	-23.0			
800	2037	- 3.0	-22.8			
780	2237	- 3.8	-21.4			
754	2505	- 2.5	-22.4			
750	2547	- 2.5	-23.0			
729	2772	- 3.6	-23.9			
700	3093	- 3.5	-23.3			

Ascn #57 7 May 1968 1125 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
982	428	11.8	8.7	Sfc	090	1.8
950	702	8.4	- 2.2	150	008	2.6
932	859	6.4	-11.2	300	026	2.0
900	1144	3.9	-12.1			
864	1474	1.0	-13.1	500	057	2.2
850	1605	0.6	-15.0	1000	026	1.0
802	2070	- 0.7	-22.7	1500	127	1.8
800	2090	- 0.4	-22.5	2000	081	6.2
766	2438	1.6	-20.2	2500	020	7.3
750	2608	1.0	-20.7	3000	003	14.6
700	3160	- 1.0	-22.3			

Ascn #58 8 May 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
979	428	6.5	5.0	Sfc	150	3.1
963	563	9.8	- 4.5	150	160	2.1
950	676	9.4	- 4.2	300	234	6.8
904	1085	7.7	- 5.0			
900	1122	7.8	- 5.6	500	154	2.8
872	1382	8.9	-10.6	1000	338	12.0
850	1593	7.6	-13.9	1500	344	11.6
847	1622	7.5	-14.6	2000	005	12.0
806	2028	3.9	-15.9			
800	2088	3.9	-16.4			
750	2611	3.2	-19.5			
746	2655	3.1	-19.6			
720	2941	0.6	-21.7			
700	3166	- 0.6	-22.0			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #59 8 May 1968 1130 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
977	428	19.2	6.6	Sfc	200	2.2
950	665	16.9	4.2	150	049	0.6
900	1127	12.6	0.0	300	193	5.4
850	1604	8.1	- 4.7			
847	1636	8.0	- 4.8	500	135	2.1
800	2101	4.4	- 7.7	1000	223	4.0
795	2148	4.0	- 8.1	1500	208	5.3
750	2625	- 0.2	-23.0	2000	240	7.1
746	2665	- 0.7	-22.8	2500	246	7.6
725	2890	2.2	-21.8	3000	243	15.6
700	3180	1.7	-22.2			

Ascn #60 9 May 1968 0530 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
972	428	13.4	10.4	Sfc	160	4.0
950	620	13.6	10.8	150	168	5.6
936	744	13.7	11.3	300	188	8.8
900	1073	11.5	8.2			
866	1393	9.3	5.1	500	163	4.7
850	1547	8.3	5.0	1000	210	14.4
800	2044	5.3	5.1	1500	241	15.6
798	2064	5.2	5.2	2000	252	16.1
760	2461	3.0	3.0			
750	2568	2.3	1.5			
700	3121	- 1.6	- 6.0			

Ascn #61 9 May 1968 1042 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
971	428	13.8	11.0	Sfc	230	5.4
950	611	13.0	10.4			
947	637	12.9	10.3			
900	1062	9.7	8.0			
890	1154	9.1	7.6			
850	1533	7.7	5.7			
848	1553	7.7	5.7			
810	1929	5.8	4.3			
800	2030	4.8	3.4			
782	2215	4.2	2.8			
758	2468	3.4	1.7			

Ascn #62 10 May 1968 0455 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
976	428	13.0	12.7	Sfc	230	1.8
950	653	11.6	11.5			
932	813	10.7	10.6			
903	1074	8.5	7.3			
900	1102	8.4	7.0			
862	1457	7.6	3.0			
850	1572	6.5	2.2			
822	1846	4.2	0.5			
800	2065	2.4	- 1.2			
769	2383	- 0.2	- 3.9			
750	2583	- 0.7	- 7.9			
734	2755	- 1.0	-12.0			
700	3132	- 3.0	-13.3			

Ascn #63 10 May 1968 1105 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
969	428	14.5	9.1	Sfc	300	3.1
950	594	13.0	5.9	150	316	5.7
923	834	10.7	1.2	300	310	6.3
910	952	9.6	1.7			
900	1044	8.5	1.4	500	310	4.2
867	1350	5.0	0.3	1000	293	7.1
850	1511	4.2	- 0.7	1500	281	7.6
826	1744	3.4	- 2.5			
800	2002	1.3	- 3.5			
793	2072	0.7	- 3.7			
778	2225	0.0	-13.3			
758	2434	1.3	-14.0			
750	2520	1.3	-14.0			
721	2837	1.3	-14.4			
700	3074	- 0.2	-18.8			

Ascn #64 11 May 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
968	428	9.1	7.7	Sfc		0.0
956	531	12.7	3.4	150	128	5.2
950	584	12.9	3.8	300	145	6.2
933	735	13.2	4.1			
900	1036	11.0	3.8	500	108	2.6
850	1509	7.6	2.7	1000	183	3.8
845	1558	7.2	2.7	1500	245	3.8
830	1704	5.4	0.9	2000	226	7.3
820	1803	5.0	4.2	2500	265	4.7
807	1933	4.5	- 5.0	3000	253	5.1
800	2004	4.4	- 5.1			
775	2262	4.0	- 5.7			
750	2527	1.1	- 7.1			
740	2635	0.0	- 7.7			
700	3078	- 2.6	- 4.7			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #65 11 May 1968 0948 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
968	428	12.3	8.6	Sfc	100	1.8
950	584	10.4	6.7			
944	636	9.8	5.6			
900	1031	8.3	4.7			

Ascn #66 12 May 1968 0526 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
960	428	15.8	15.5	Sfc	220	4.5
950	516	15.5	15.2			
923	759	14.4	14.1			
900	971	13.0	12.7			
850	1448	10.0	9.9			
848	1468	9.8	9.7			
800	1949	8.4	5.1			
792	2032	8.1	4.3			
750	2479	5.0	0.7			
700	3038	1.2	- 3.8			

Ascn #67 13 May 1968 0440 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
970	428	9.0	8.3	Sfc	280	1.3
950	599	8.0	6.5			
938	704	7.6	5.6			
909	962	6.5	4.5			
900	1043	6.0	4.3			
850	1508	3.4	2.9			
842	1585	2.9	2.6			
810	1898	2.9	- 4.1			
800	1999	4.6	- 4.9			
795	2050	5.5	- 5.5			
774	2268	3.6	-14.6			
750	2524	4.1	-19.5			
742	2611	4.2	-20.2			
700	3082	1.1	-23.5			

Ascn #68 21 May 1968 0510 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	96					
961	428	7.0	5.0	Sfc	240	2.2
950	522	6.7	5.2			
940	609	6.4	5.3			
917	811	4.5	4.2			
900	963	3.3	3.0			
890	1053	2.7	2.4			
869	1246	2.8	0.8			
850	1424	1.5	- 0.9			
835	1567	0.7	- 2.0			
809	1820	- 1.5	- 2.7			
800	1909	- 2.0	- 3.4			
750	2420	- 4.5	- 7.9			
712	2826	- 8.4	-10.3			
700	2958	- 9.4	-14.4			

Ascn #69 22 May 1968 1420 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	149					
967	428	11.3	10.1	Sfc	270	3.1
950	575	12.0	7.9	150	273	4.2
947	602	12.0	5.2	300	270	7.3
900	1024	7.8	2.8			
878	1227	5.8	0.7	500	305	6.0
850	1490	3.4	0.0	1000	271	7.7
817	1809	0.1	- 1.5	1500	265	5.7
800	1978	- 0.4	- 1.8			
793	2048	- 0.8	- 2.0			
759	2396	- 3.3	- 6.9			
750	2490	- 3.9	- 8.4			
730	2703	- 5.2	-11.8			
700	3031	- 7.1	-17.1			

Ascn #70 23 May 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	147					
967	428	9.9	7.3	Sfc		0.0
950	576	14.0	0.9	150	111	3.5
900	1027	9.8	- 0.9	300	162	4.5
856	1440	5.8	- 3.5			
850	1497	5.3	- 3.0	500	101	3.9
800	1987	0.6	- 2.1	1000	183	5.5
768	2313	- 2.3	- 2.3	1500	179	5.6
750	2501	- 3.5	- 3.5	2000	191	7.1
732	2693	- 4.6	- 4.6			
700	3043	- 6.6	- 6.6			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #71 23 May 1968 0933 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	140					
966	428	10.0	8.8	Sfc		0.0
952	548	9.4	3.6			
950	566	9.1	3.5			
900	1011	6.2	2.1			
886	1139	5.4	1.8			
850	1476	2.7	0.6			
846	1514	2.5	0.8			
838	1590	2.5	1.0			

Ascn #72 24 May 1968 0624 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	103					
962	428	11.4	11.1	Sfc		0.0
950	532	10.5	10.4			
948	549	10.5	10.4			
933	682	10.4	10.4			
900	981	10.4	10.4			
875	1215	10.5	10.5			
850	1455	9.4	9.4			
800	1955	6.9	6.8			
753	2450	4.6	4.4			
750	2482	4.3	3.8			
700	3040	1.3	- 1.9			

Ascn #73 25 May 1968 0454 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	196					
972	428	3.2	3.2	Sfc		0.0
950	615	11.2	- 1.2	150	070	5.2
947	642	12.1	- 2.5	300	080	6.4
900	1065	8.9	- 6.5			
850	1534	5.3	-11.3	500	069	2.2
840	1630	4.6	-11.9	1000	084	10.7
800	2026	3.0	-16.6	1500	081	11.4
780	2231	2.4	-18.9	2000	084	2.0
764	2399	3.2	-18.2			
750	2548	2.6	-18.7			
700	3104	0.6	-20.4			

Ascn #74 25 May 1968 1331 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	185					
970	428	20.0	17.1	Sfc	060	4.9
964	481	18.0	- 0.2	150	050	3.3
950	605	16.8	- 0.8	300	075	4.7
900	1061	12.4	- 3.4			
850	1535	7.8	- 6.3	500	055	4.3
828	1750	5.9	- 7.3	1000	085	5.4
815	1880	5.0	-13.9	1500	078	4.1
800	2031	6.2	-15.1	2000	074	3.7
798	2052	6.5	-14.8	2500	067	6.0
772	2323	5.0	-18.0	3000	020	2.6
750	2558	4.3	-19.3			
742	2645	4.1	-19.5			
735	2722	5.2	-17.9			
700	3119	3.0	-19.7			

Ascn #75 26 May 1968 0455 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	144					
967	428	10.1	5.7	Sfc	080	4.9
950	575	10.8	4.9	150	108	4.8
932	734	11.6	3.8	300	134	8.8
910	933	11.6	5.2			
900	1025	11.3	0.9	500	086	4.6
882	1194	10.6	-12.7	1000	148	14.9
850	1502	12.0	-13.8	1500	154	14.2
840	1601	12.6	-14.2	2000	162	3.4
800	2007	10.3	-16.0	2500	169	7.1
750	2541	7.5	-17.5	3000	220	6.2
700	3105	4.4	-20.0			

Ascn #76 26 May 1968 1150 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	118					
965	428	21.9	10.4	Sfc	080	4.1
950	562	19.6	5.3	150	098	3.8
943	626	18.5	2.7	300	147	4.1
900	1022	14.9	1.4			
850	1500	10.2	- 1.1	500	070	4.1
835	1648	8.8	- 1.8	1000	140	9.3
800	2002	9.4	-10.1	1500	148	3.6
791	2095	9.6	-13.6	2000	204	2.6
760	2425	7.3	-14.8	2500	269	2.1
750	2534	7.1	-15.0	3000	306	1.7
730	2756	6.9	-15.8			
700	3099	4.1	-12.3			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #77 27 May 1968 0509 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	102					
962	428	9.5	8.3	Sfc	100	7.2
950	532	10.3	4.6			
900	977	5.4	4.8			
877	1187	3.2	3.2			
850	1441	5.6	5.6			
848	1460	5.8	5.8			
824	1698	10.8	7.3			
800	1943	10.0	3.9			
796	1984	9.9	3.8			
775	2206	8.8	3.0			
750	2476	6.6	2.3			
700	3036	2.0	1.1			

Ascn #78 27 May 1968 1112 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	122					
964	428	7.2	6.9	Sfc	110	3.6
955	504	6.3	- 2.3			
950	547	5.8	- 2.2			
902	970	2.3	- 0.7			
900	987	2.0	- 1.0			
872	1242	0.5	- 2.5			
863	1325	4.7	1.9			
850	1449	5.2	2.5			
820	1743	6.3	4.1			
805	1894	6.3	5.4			
800	1945	6.1	5.0			
772	2236	5.2	3.2			

Ascn #79 28 May 1968 0447 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	125					
964	428	7.4	6.2	Sfc	090	4.5
950	547	6.4	4.7	150	089	6.5
923	783	4.7	2.4	300	115	9.9
900	988	4.2	2.7			
894	1042	4.2	3.0	500	088	5.2
854	1415	4.9	4.7	1000	129	17.8
850	1453	5.0	4.7	1500	147	25.8
830	1647	5.7	4.9			
800	1947	3.7	3.1			
750	2467	0.2	0.0			
745	2521	0.0	0.0			
700	3018	- 2.5	- 2.5			

Ascn #80 28 May 1968 1147 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	132					
965	428	10.8	9.7	Sfc	110	4.5
950	558	9.8	5.8			
939	654	9.0	3.0			
900	1002	5.0	3.0			
898	1020	4.7	3.2			
870	1278	4.4	1.7			
850	1467	6.3	1.4			
809	1871	4.7	- 3.5			
800	1962	3.9	- 4.0			
775	2219	2.3	- 4.0			
750	2483	1.1	- 5.1			
716	2855	- 0.4	- 6.8			
700	3035	- 1.2	- 8.2			

Ascn #81 29 May 1968 0454 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	96					
961	428	5.8	5.8	Sfc		0.0
950	522	7.0	5.6	150	171	2.4
940	609	7.8	5.3	300	240	2.9
900	966	6.8	3.6			
896	1002	6.7	3.3	500	163	1.4
850	1432	4.2	2.7	1000	230	4.2
834	1587	3.5	2.4	1500	244	3.6
808	1844	4.1	- 0.8	2000	300	7.5
800	1924	3.4	- 1.5	2500	255	8.7
786	2067	2.2	- 2.7			
768	2254	1.4	- 4.4			
750	2444	0.0	- 4.0			
732	2638	- 1.1	- 3.1			
700	2993	- 3.2	- 4.7			

Ascn #82 29 May 1968 1321 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	77					
954	428	17.0	11.5	Sfc	240	6.3
950	463	16.6	9.1	150	251	4.0
938	571	15.7	3.8	300	245	5.5
900	919	12.1	3.1			
850	1392	7.3	1.3	500	245	5.4
846	1431	7.0	1.3	1000	236	8.1
810	1787	4.8	- 1.0	1500	252	8.3
800	1888	4.0	- 0.9	2000	246	12.4
750	2408	0.0	- 2.2	2500	231	12.5
736	2558	- 1.1	- 2.5			
700	2956	- 4.0	- 5.2			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #83 30 May 1968 0450 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	70					
958	428	9.4	9.1	Sfc		0.0
950	497	10.5	8.3	150	278	1.5
940	585	12.1	7.6	300	253	3.6
900	947	9.5	4.9			
878	1151	8.0	3.4	500	300	0.4
850	1418	7.6	2.5	1000	234	3.4
838	1535	7.5	2.2	1500	250	4.7
800	1914	4.5	0.4	2000	212	7.3
788	2037	3.7	0.0	2500	209	10.4
750	2437	1.7	- 3.1	3000	204	8.3
743	2512	1.4	- 3.4			
716	2809	- 1.4	- 5.1			
700	2988	- 1.9	- 5.9			

Ascn #84 31 May 1968 0504 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	95					
961	428	10.3	8.9	Sfc	240	4.1
950	523	9.4	8.2			
945	567	9.0	7.8			
901	958	6.0	5.5			
900	968	5.9	5.4			
850	1433	3.6	3.3			
838	1548	3.1	2.8			
813	1793	1.6	1.0			
800	1922	0.9	0.1			
774	2187	- 0.6	- 1.4			
755	2385	- 1.8	- 3.5			
750	2438	- 2.1	- 3.6			
723	2728	- 3.6	- 4.4			
700	2982	- 5.7	- 6.2			

Ascn #85 31 May 1968 1012 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	106					
962	428	13.5	9.2	Sfc	270	5.4
950	533	12.2	7.5	150	278	7.0
926	746	10.0	4.4	300	277	8.3
900	981	8.1	4.1			
860	1354	5.2	3.8	500	273	6.0
850	1449	4.7	2.5	1000	276	11.0
800	1940	2.0	- 2.9			
797	1971	1.9	- 3.3			
774	2206	0.8	- 4.6			
759	2363	0.0	- 8.2			
750	2458	- 0.7	- 8.6			
738	2587	- 1.5	- 8.9			
726	2717	- 2.6	-11.8			
710	2894	- 3.8	-13.5			
700	3005	- 4.8	-13.4			

Ascn #86 1 June 1968 0505 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	149					
967	428	9.5	9.5	Sfc		0.0
950	575	11.4	8.4			
940	663	12.3	7.4			
900	1025	9.9	4.7			
881	1201	8.6	3.2			
850	1496	6.7	0.6			
839	1603	6.0	- 0.4			
808	1910	3.9	- 1.4			
800	1990	3.6	- 3.0			
786	2133	3.3	- 5.6			
761	2395	2.4	- 6.2			
750	2513	3.4	- 7.4			
731	2721	4.9	-10.8			
700	3073	3.5	-13.3			

Ascn #87 25 June 1968 0500 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	105					
963	428	18.3	18.1	Sfc	210	1.8
950	543	18.2	17.8			
900	1005	18.1	17.0			
891	1091	18.1	16.8			
850	1491	15.9	13.1			
823	1764	14.4	10.0			
800	2002	13.0	8.3			
780	2214	11.6	6.1			
750	2540	9.6	2.9			

Ascn #88 26 June 1968 0500 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	- 10					
951	428	18.3	16.0	Sfc	250	7.4
950	436	18.3	16.0			
900	896	15.7	14.1			
850	1377	12.8	12.2			
818	1697	10.9	10.6			
800	1882	10.6	10.2			
750	2417	9.1	7.6			
727	2675	8.4	6.4			
700	2987	8.4	4.2			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #89 27 June 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	44					
956	428	18.2	17.1	Sfc	210	0.9
950	481	18.1	17.2	150	224	4.5
918	773	17.2	16.6	300	238	9.3
900	941	16.2	13.7			
876	1170	15.0	9.8	500	211	1.8
850	1423	12.9	11.0	1000	247	11.2
840	1522	12.1	11.2	1500	253	10.4
807	1857	12.1	6.2			
800	1930	11.6	6.1			
750	2465	7.6	6.2			
748	2487	7.5	6.3			
700	3030	5.4	4.8			

Ascn #90 28 June 1968 0440 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	82					
960	428	12.9	11.7	Sfc	195	0.9
950	515	12.7	9.9	150	216	2.1
936	639	12.4	7.7	300	219	11.9
900	966	9.2	6.3			
864	1301	6.1	5.0	500	205	1.5
850	1435	5.3	4.2	1000	223	11.5
800	1926	1.9	1.0			
797	1957	1.8	0.9			
750	2444	- 0.8	- 1.5			
730	2660	- 1.8	- 2.5			
700	2992	- 3.5	- 4.0			

Ascn #91 29 June 1968 0500 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	130					
966	428	14.2	11.7	Sfc	210	3.1
950	569	16.4	9.8	150	211	8.0
944	622	17.2	8.9	300	219	14.1
900	1028	16.6	7.0			
892	1104	16.4	6.5	500	206	3.6
850	1510	13.1	6.9	1000	245	18.8
837	1639	12.1	6.6	1500	264	15.8
814	1872	11.4	- 0.7	2000	266	16.8
800	2016	10.4	2.7	2500	267	19.2
798	2037	10.3	2.9			
768	2355	9.0	-13.4			
750	2550	7.5	- 1.4			
736	2705	6.4	- 3.9			
700	3114	3.7	- 2.5			

Ascn #92 29 June 1968 1100 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	127					
966	428	24.1	15.1	Sfc	210	6.2
950	572	21.7	12.3	150	218	7.0
900	1036	17.1	7.7	300	225	7.3
886	1169	15.8	6.2			
865	1372	16.1	7.8	500	213	6.5
850	1520	15.3	7.1	1000	230	10.0
805	1978	13.0	4.9	1500	240	11.5
800	2030	13.0	4.9	2000	248	17.3
783	2210	13.3	4.7	2500	266	22.3
753	2537	11.2	1.7	3000	285	14.3
750	2571	11.6	0.6			
740	2683	13.1	- 9.3			
700	3148	12.3	-14.4			

Ascn #93 30 June 1968 0450 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	162					
970	428	18.8	17.4	Sfc	210	4.1
950	606	20.5	17.2	150	223	5.5
938	716	21.5	17.0	300	254	11.1
900	1072	20.0	13.0			
850	1561	17.9	7.3	500	213	4.6
826	1805	16.9	4.2	1000	272	12.4
800	2076	15.1	2.3	1500	268	22.0
750	2618	11.8	0.0	2000	288	20.4
728	2866	10.1	- 1.2			
700	3190	8.0	-13.6			

Ascn #94 30 June 1968 1130 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	158					
970	428	30.5	19.3	Sfc	260	7.7
950	612	27.9	14.6			
927	827	25.0	8.9			
900	1084	22.8	7.8			
878	1298	20.9	7.2			
850	1576	19.0	4.4			
800	2093	15.7	- 1.3			
759	2536	12.7	- 6.8			
750	2635	12.6	- 7.4			
700	3213	12.1	-12.2			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #95 1 July 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	156					
969	428	18.8	17.5	Sfc	210	2.6
950	597	20.5	17.2	150	205	4.8
928	800	22.6	16.9	300	255	9.0
900	1064	20.6	15.9			
850	1553	17.0	14.0	500	207	3.5
837	1684	16.0	13.3	1000	278	14.9
800	2066	14.8	3.9	1500	278	16.6
786	2215	14.3	- 0.9	2000	290	15.8
750	2609	13.0	- 7.1	2500	255	8.9
724	2904	12.1	-12.2	3000	259	17.4
700	3185	9.9	-10.2			

Ascn #96 2 July 1968 0540 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	158					
969	428	16.7	16.1	Sfc		0.0
952	579	20.0	15.1	150	236	3.5
950	597	20.0	14.6	300	278	3.4
904	1021	18.0	2.3			
900	1059	17.9	1.8	500	220	1.5
850	1545	16.3	- 5.4	1000	313	7.5
800	2056	13.1	9.9	1500	276	11.6
750	2595	10.2	2.5	2000	255	21.2
700	3165	7.2	- 6.8			

Ascn #97 3 July 1968 0550 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	171					
971	428	15.8	14.6	Sfc	320	1.0
950	6.2	15.0	12.4			
923	855	14.2	9.2			
900	1067	12.5	11.3			
898	1086	12.4	11.3			
860	1446	10.3	9.4			
850	1543	10.2	8.6			
808	1963	9.6	4.8			
800	2046	8.8	4.6			
750	2574	4.0	2.6			
736	2727	2.6	2.0			
727	2827	4.5	- 7.3			
700	3133	1.9	-10.9			

Ascn #98 3 July 1968 1105 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	181					
972	428	22.1	15.7	Sfc	280	3.1
950	642	19.0	11.3	150	289	3.0
902	1063	12.2	3.4	300	300	2.9
900	1081	12.1	3.3			
850	1556	8.8	2.3	500	314	2.8
804	2013	5.4	0.9	1000	298	3.5
800	2054	5.2	0.5			
782	2239	4.7	- 0.6			
759	2480	- 0.1	-21.6			
750	2576	2.8	-19.2			
744	2641	5.1	-18.0			
700	3137	3.3	-19.4			

Ascn #99 4 July 1968 0450 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	204					
973	428	6.1	5.5	Sfc		0.0
952	607	9.7	7.8	150	057	2.4
950	624	9.6	7.5	300	033	7.3
900	1070	6.9	3.1			
872	1329	5.4	0.5	500	050	1.5
850	1537	5.6	- 4.0			
845	1585	5.7	- 5.3			
800	2033	5.6	- 7.6			
795	2084	5.6	- 7.6			
750	2557	3.0	-12.9			
700	3113	0.0	-19.7			

Ascn #100 4 July 1968 1030 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	205					
974	428	18.3	9.4	Sfc	020	2.6
950	639	14.9	4.6	150	343	3.2
928	836	11.8	0.2	300	304	2.5
900	1091	9.6	- 1.1			
850	1561	5.5	- 4.3	500	002	3.0
836	1696	4.2	- 5.5	1000	345	7.2
817	1884	6.9	-18.0	1500	003	7.3
800	2056	6.3	-17.7	2000	328	7.6
784	2221	5.7	-16.8	2500	291	3.2
750	2582	3.6	-18.5	3000	306	4.5
700	3139	0.5	-21.1			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #101 5 July 1968 0440 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	194					
972	428	6.5	6.3	Sfc		0.0
950	618	15.5	6.2	150	205	2.2
926	834	14.6	1.5	300	253	1.6
900	1073	12.8	- 1.8			
850	1549	9.0	-10.5	500	165	1.2
818	1865	6.6	-16.0	1000	282	3.7
800	2047	6.0	-15.3	1500	282	3.5
750	2574	4.7	-11.0	2000	298	6.6
738	2705	4.3	-10.5	2500	292	6.7
700	3132	1.0	-21.3	3000	291	8.1

Ascn #102 5 July 1968 1135 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	189					
973	428	21.2	11.8	Sfc	320	2.1
950	633	19.4	5.5	150	167	1.8
927	842	17.4	- 1.2	300	203	3.4
900	1093	15.0	- 1.9			
850	1571	10.3	- 3.0	500	260	2.0
810	1969	6.4	- 4.3	1000	202	3.0
800	2071	6.9	- 5.7	1500	224	3.4
790	2174	7.2	- 7.2	2000	254	2.9
750	2599	4.6	-10.3	2500	313	4.6
700	3157	1.3	-14.0	3000	295	6.8

Ascn #103 6 July 1968 0440 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	179					
971	428	12.8	12.7	Sfc		0.0
952	594	17.4	11.7	150	217	2.4
950	612	17.3	11.6	300	287	4.3
916	921	15.5	8.5			
900	1070	14.3	8.5	500	163	1.0
850	1548	10.7	7.8	1000	310	9.9
816	1886	8.1	6.9	1500	277	6.3
800	2049	7.0	5.9	2000	267	8.7
760	2468	4.0	3.1			
750	2575	3.4	2.0			
700	3131	0.1	- 4.1			

Ascn #104 6 July 1968 1118 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	198					
974	428	21.3	14.7	Sfc	050	0.9
950	641	18.2	12.2	150	028	1.8
902	1079	12.1	6.8	300	353	2.1
900	1098	12.0	6.7			
850	1573	9.6	- 0.5	500	042	1.3
840	1671	9.0	- 2.5	1000	355	2.8
800	2073	6.4	- 6.2	1500	355	4.9
750	2598	3.1	-10.5	2000	331	8.7
735	2762	2.1	-12.5	2500	298	8.4
700	3154	0.0	-19.2	3000	289	12.5

Ascn #105 8 July 1968 0445 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	183					
971	428	10.2	9.9	Sfc	090	0.9
951	603	18.9	8.8	150	181	0.6
950	612	18.9	9.1	300	293	0.5
900	1073	17.8	7.5			
897	1102	17.8	7.5	500	135	1.0
854	1518	14.1	- 0.3	1000	249	3.7
850	1557	14.0	- 0.4			
814	1921	13.0	- 1.7			
800	2066	11.5	- 0.3			
790	2171	10.6	0.6			
764	2449	10.9	- 6.0			
750	2603	9.9	- 6.8			
700	3172	7.0	- 9.4			

Ascn #106 8 July 1968 1115 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	182					
972	428	26.7	15.5	Sfc	210	2.1
950	628	24.4	11.4	150	215	3.1
918	925	21.1	5.0	300	221	4.4
900	1095	19.4	3.1			
850	1581	14.8	- 1.7	500	212	2.4
819	1893	11.6	- 4.9	1000	250	5.3
800	2088	11.0	- 6.3	1500	284	5.3
753	2591	9.7	- 8.9	2000	259	7.4
750	2624	9.2	- 9.3	2500	260	8.2
700	3192	5.4	-13.5	3000	260	7.2

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #107 9 July 1968 0524 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	157					
969	428	16.7	15.3	Sfc		0.0
960	507	20.6	15.7	150	211	5.3
950	597	20.3	15.4	300	204	9.1
914	929	19.4	13.8			
900	1061	18.5	12.7	500	216	2.1
862	1428	15.8	9.9	1000	210	4.4
850	1546	15.5	12.7	1500	207	4.4
846	1586	15.4	13.6	2000	207	5.5
820	1850	14.3	10.0			
800	2057	12.8	8.3			
781	2258	11.5	7.0			
752	2572	8.4	5.7			
750	2594	8.2	5.3			
700	3161	6.2	- 6.0			

Ascn #108 9 July 1968 1156 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	160					
970	428	27.2	15.6	Sfc	200	4.5
950	610	24.2	12.5	150	293	1.6
936	739	22.0	10.5	300	321	1.9
920	887	20.1	9.7			
900	1075	18.2	8.8	500	242	3.0
872	1344	15.4	7.2	1000	324	3.3
850	1560	15.4	6.4	1500	294	2.7
835	1710	15.4	6.1			
800	2070	11.5	2.5			
788	2196	10.0	1.1			
750	2605	8.5	- 0.7			
733	2794	7.7	- 1.7			

Ascn #109 10 July 1968 0549 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	138					
967	428	16.1	14.3	Sfc		0.0
956	525	19.1	13.8			
950	579	19.6	14.3			
939	679	20.5	15.3			
900	1042	18.3	14.8			
860	1429	16.0	13.9			
850	1528	15.0	13.2			
820	1830	12.4	11.3			
800	2036	11.3	8.9			
750	2571	8.4	1.7			
738	2704	7.0	0.4			
723	2872	6.0	2.2			
700	3136	4.5	0.4			

Ascn #110 10 July 1968 1112 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	142					
968	428	28.6	19.3	Sfc		0.0
950	592	24.1	11.8			
900	1059	19.4	9.9			
888	1174	18.3	9.1			
852	1526	15.9	5.5			
850	1546	15.7	5.3			
824	1808	14.0	3.1			
800	2056	12.4	1.7			
784	2224	11.3	0.7			
750	2593	9.0	- 1.7			
700	3160	5.5	- 5.2			

Ascn #111 14 July 1968 0548 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	171					
970	428	16.1	15.4	Sfc	100	1.3
962	498	20.4	18.8	150	183	2.6
950	606	20.4	17.9	300	224	4.3
918	901	20.4	15.5			
900	1071	19.2	12.7	500	112	1.8
862	1439	17.0	7.4	1000	267	4.0
850	1558	16.1	7.3	1500	291	2.7
828	1780	15.0	8.0	2000	177	1.0
800	2069	13.7	1.3			
795	2122	13.6	0.2			
750	2610	10.8	- 1.5			
722	2926	9.1	- 2.8			
700	3181	7.4	- 3.4			

Ascn #112 14 July 1968 1200 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	180					
972	428	26.8	19.5	Sfc	250	1.8
950	628	23.6	16.9	150	220	2.2
926	849	20.5	14.4	300	214	2.0
912	979	18.5	3.9			
900	1093	19.4	8.4	500	245	1.4
898	1112	19.5	8.8	1000	192	1.8
850	1580	16.4	4.4	1500	350	0.3
826	1823	15.0	2.2	2000	339	1.4
800	2092	13.0	2.2	2500	031	0.4
792	2176	12.3	2.2	3000	323	0.7
764	2476	10.9	- 7.3			
750	2630	10.0	- 7.6			
700	3199	6.8	- 8.7			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #113 15 July 1968 0558 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	183					
972	428	20.9	20.5	Sfc	200	4.5
950	624	19.8	19.4			
937	742	19.4	19.0			
923	872	19.7	19.1			
900	1087	18.2	16.9			
886	1221	17.4	15.8			
850	1573	15.7	12.5			
810	1980	13.9	8.5			
800	2084	13.0	8.1			
780	2296	11.6	7.3			
750	2622	9.2	4.8			
723	2925	8.5	6.6			
700	3191	7.3	3.7			

Ascn #114 16 July 1968 0557 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	242					
971	428	19.9	19.2	Sfc	220	1.3
950	615	19.6	19.0			
917	918	19.0	18.6			
900	1078	17.4	17.0			
879	1278	15.8	15.2			
854	1522	16.0	15.7			
850	1562	15.5	14.9			
824	1824	12.5	10.8			
800	2071	11.5	7.2			
758	2519	9.6	0.7			
750	2607	9.1	0.5			
900	3175	6.3	- 0.2			

Ascn #115 17 July 1968 0551 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	160					
969	428	17.4	17.3	Sfc		0.0
952	578	19.0	18.1	150	227	3.6
950	596	18.9	17.6	300	272	3.6
906	1002	18.7	14.8			
900	1059	18.4	14.7	500	237	1.8
852	1525	15.9	12.5	1000	291	6.2
850	1545	15.9	12.5	1500	327	4.9
818	1870	15.9	13.8	2000	130	1.6
800	2058	14.9	11.5			
785	2217	13.2	7.9			
750	2598	11.0	6.3			
722	2914	8.4	4.6			
700	3168	6.3	3.3			

Ascn #116 18 July 1968 0620 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	152					
968	428	18.9	18.3	Sfc		0.0
954	553	21.2	20.5	150	225	2.5
950	589	21.3	20.2	300	268	4.0
928	791	22.1	19.0			
900	1055	20.1	15.0	500	205	1.1
850	1544	17.2	13.0	1000	257	4.6
848	1564	17.1	12.9	1500	263	6.6
800	2056	13.6	11.5	2000	241	5.5
796	2099	13.4	11.5			
776	2312	12.5	- 0.7			
750	2596	10.9	1.1			
744	2663	10.5	1.0			
700	3169	9.5	- 3.4			

Ascn #117 19 July 1968 0551 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	109					
964	428	20.6	17.1	Sfc		0.0
950	554	21.5	18.0	150	232	4.1
948	572	21.6	18.1	300	238	7.3
928	755	20.5	18.9			
900	1019	20.3	18.0	500	232	1.8
886	1154	20.1	17.6	1000	236	9.7
859	1418	18.0	14.0	1500	251	9.2
850	1508	17.3	13.5	2000	253	12.9
800	2021	14.0	11.4	2500	248	15.8
750	2561	10.6	9.0			
745	2617	10.3	8.9			
700	3133	8.6	1.9			

Ascn #118 19 July 1968 0938 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	120					
965	428	21.1	18.8	Sfc	240	3.6
950	562	20.0	18.4	150	247	3.7
921	828	18.0	17.4	300	249	6.6
900	1024	17.2	16.6			
854	1469	15.4	14.7	500	247	3.1
850	1508	15.0	13.9			
800	2018	12.2	8.5			
770	2337	10.6	5.1			
750	2555	9.6	3.5			
741	2655	9.2	2.9			
700	3125	7.0	- 1.9			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #119 21 July 1968 0453 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	199					
973	428	12.0	11.3	Sfc		0.0
953	603	17.6	15.3	150	090	1.9
950	629	17.5	12.9	300	060	2.8
931	801	17.4	12.3			
900	1089	15.5	10.9	500	087	0.9
851	1559	11.2	7.5	1000	099	3.0
850	1568	11.2	7.3	1500	305	4.2
810	1970	11.3	2.6	2000	333	3.4
800	2074	11.0	2.3	2500	321	3.2
751	2598	9.5	1.1	3000	325	10.6
750	2609	9.4	1.0			
700	3180	8.8	0.0			

Ascn #120 21 July 1968 1157 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	204					
974	428	24.1	9.3	Sfc	210	1.8
950	644	22.0	----			
940	735	21.2	----			
900	1108	17.6	----			
850	1591	13.0	----			
840	1690	12.3	----			
800	2097	10.6	----			
785	2254	10.2	----			
750	2633	10.5	----			
746	2678	10.6	----			

Ascn #121 22 July 1968 0557 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	175					
971	428	16.6	----	Sfc		0.0
958	543	21.4	----	150	196	2.5
950	615	21.3	----	300	236	5.9
913	958	21.1	----			
900	1081	20.0	----	500	188	1.2
850	1568	15.9	----	1000	254	7.6
805	2026	12.0	----	1500	264	12.5
800	2078	11.7	----	2000	267	11.2
753	2580	8.4	----	2500	264	13.0
750	2613	8.4	----			
744	2680	8.4	----			
729	2848	10.2	----			
700	3185	8.9	----			

Ascn #122 22 July 1968 1235 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	168					
971	428	28.4	18.6	Sfc	240	4.4
950	620	25.4	13.6	150	245	5.5
941	703	24.3	11.6	300	262	5.2
926	842	23.0	12.1			
900	1088	20.6	10.7	500	242	4.7
882	1262	19.2	10.0	1000	273	6.7
850	1578	17.4	6.0	1500	283	8.6
800	2090	13.4	1.4	2000	276	11.8
750	2630	10.9	- 5.5			
700	3201	7.7	-12.7			

Ascn #123 23 July 1968 0504 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	182					
972	428	18.1	17.2	Sfc	220	2.2
950	623	17.6	16.7	150	228	4.8
915	942	16.8	16.1	300	244	7.3
900	1082	17.0	16.8			
850	1566	14.8	10.6	500	222	2.8
829	1777	15.0	10.8	1000	292	10.3
800	2077	12.7	9.7			
762	2483	11.2	2.5			
750	2615	10.3	0.6			
700	3185	6.4	- 8.3			

Ascn #124 15 October 0752 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	224					
976	428	12.2	11.0	Sfc		0.0
968	496	14.1	12.7	150	187	3.5
950	654	14.2	11.7	300	220	5.3
910	1017	14.5	9.7			
900	1110	13.9	9.2	500	178	1.4
886	1241	13.1	8.4	1000	272	5.1
850	1588	10.7	3.9	1500	283	4.1
807	2020	10.9	- 4.7	2000	229	1.5
800	2092	10.4	- 5.1	2500	204	1.1
750	2625	6.9	- 7.1	3000	149	3.0
733	2813	5.8	- 7.4			
700	3188	3.7	- 9.3			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #125 15 October 1968 1333 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	214					
976	428	24.4	10.7	Sfc	260	1.8
962	553	22.3	9.1	150	228	3.3
950	661	21.1	8.4	300	219	3.5
900	1124	16.4	6.0			
850	1605	11.4	3.2	500	246	2.4
844	1664	10.9	2.9	1000	203	3.2
802	2089	11.5	- 4.2	1500	167	2.8
800	2110	11.4	- 4.3	2000	169	3.9
750	2646	8.8	- 7.0	2500	159	3.0
700	3213	6.0	- 9.4	3000	164	4.3

Ascn #126 16 October 1968 0708 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	213					
975	428	13.8	12.2	Sfc		0.0
950	647	16.1	12.5	150	163	4.7
943	709	16.8	12.6	300	186	7.0
912	993	16.2	9.2			
900	1105	15.4	8.6	500	153	2.0
875	1343	13.8	7.8	1000	209	5.8
850	1585	11.3	5.6			
843	1654	10.6	4.9			
800	2089	10.1	- 0.1			
798	2110	10.1	- 0.4			
750	2621	5.9	- 2.6			
746	2664	5.5	- 3.0			
700	3184	4.9	-12.1			

Ascn #127 16 October 1968 1458 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	194					
974	428	23.4	13.3	Sfc	180	5.4
950	643	20.5	10.6	150	168	5.1
912	992	16.2	6.9	300	157	4.8
900	1104	15.1	6.6			
866	1427	12.2	5.6	500	175	5.3
850	1583	11.0	4.2	1000	153	7.3
842	1662	10.4	3.2	1500	186	8.2
828	1801	11.3	0.4	2000	209	7.4
800	2087	9.8	- 0.6	2500	186	8.4
791	2181	9.3	- 1.1	3000	168	13.2
750	2618	5.5	- 3.3			
746	2662	5.1	- 3.6			
700	3180	3.7	- 5.7			

Ascn #128 17 October 1968 0652 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	200					
974	428	18.2	15.5	Sfc	140	3.2
950	640	17.2	13.8	150	156	6.2
910	1005	15.7	11.5	300	177	7.9
900	1098	15.0	11.2			
886	1231	14.1	10.9	500	143	2.9
872	1365	15.5	10.1	1000	213	8.2
850	1580	13.8	9.3	1500	218	8.9
800	2086	9.6	7.2			
769	2412	7.0	5.9			
750	2617	5.7	4.6			
700	3178	2.4	1.5			

Ascn #129 17 October 1968 1351 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	171					
971	428	25.0	16.0	Sfc	180	4.4
950	618	22.8	13.1	150	144	3.2
913	960	18.6	8.0	300	147	3.5
900	1082	17.4	7.2			
856	1505	12.8	4.5	500	150	3.8
850	1564	12.4	4.1	1000	150	4.7
813	1935	10.3	1.1	1500	160	4.6
800	2069	9.7	0.3	2000	198	5.8
750	2602	7.4	- 3.1	2500	189	9.9
721	2925	6.0	- 5.0			

Ascn #130 18 October 1968 1330 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	148					
968	428	19.3	16.8	Sfc	160	2.7
950	588	17.3	14.8	150	153	2.6
922	841	14.2	11.7	300	160	7.9
900	1044	13.4	11.0			
883	1204	12.7	10.3	500	151	1.6
865	1376	12.7	8.0			
850	1523	12.7	10.1			
846	1562	12.7	10.4			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #131 19 October 1968 0655 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	84					
960	428	17.3	17.2	Sfc	220	1.8
950	516	16.9	16.8			
927	725	16.3	16.2			
900	974	14.6	14.5			
876	1202	13.2	13.1			
850	1454	12.1	11.7			
800	1959	10.2	9.5			
750	2493	8.1	7.0			
734	2671	7.5	6.3			
700	3059	4.9	3.5			

Ascn #132 20 October 1968 0636 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	132					
964	428	2.9	2.7	Sfc		0.0
950	546	5.7	1.6	150	230	4.6
937	660	8.6	0.0	300	284	7.0
910	901	9.3	- 1.1			
900	992	8.6	- 1.7	500	221	1.9
850	1462	5.9	- 3.7	1000	277	10.8
838	1578	5.2	- 4.1	1500	294	12.2
800	1955	2.9	- 8.1			
794	2016	2.5	- 9.1			
755	2422	1.8	-11.0			
750	2476	1.9	-11.6			
735	2639	2.1	-13.7			
715	2863	5.6	-16.2			
700	3035	4.6	-16.4			

Ascn #133 20 October 1968 1344 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	102					
962	428	16.1	5.4	Sfc	270	5.4
950	534	15.0	3.5	150	275	8.0
900	987	10.9	- 2.8	300	281	7.5
850	1459	6.4	- 9.9			
824	1712	4.0	-14.3	500	274	6.6
800	1952	4.2	-17.4	1000	283	10.7
797	1983	4.2	-18.0	1500	282	10.5
750	2475	1.9	-19.3	2000	303	18.5
735	2637	1.0	-19.5	2500	299	20.2
700	3027	- 1.8	-16.3			

Ascn #134 21 October 1968 0637 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	154					
967	428	6.1	4.4	Sfc	270	1.3
950	572	4.9	2.6	150	285	3.4
942	641	4.2	1.5	300	313	8.3
917	860	4.4	0.7			
900	1011	3.3	- 0.3	500	270	1.8
859	1387	0.4	- 3.1	1000	324	11.4
850	1471	- 0.3	- 3.3	1500	327	8.4
808	1873	- 4.7	- 5.2			
800	1952	- 0.9	- 3.9			
795	2002	2.0	- 2.7			
777	2187	2.2	-10.6			
750	2472	1.2	-12.6			
700	3025	- 0.7	-17.8			

Ascn #135 21 October 1968 1348 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	160					
969	428	12.2	5.6	Sfc	290	2.7
950	592	10.3	3.1	150	300	4.6
900	1037	5.2	- 4.1	300	292	5.9
894	1092	4.7	- 4.8			
853	1472	1.1	- 2.6	500	302	3.7
850	1500	0.9	- 3.0	1000	284	6.8
836	1633	- 0.2	- 5.6	1500	282	5.1
814	1848	4.7	-15.2	2000	317	16.7
800	1990	6.0	-13.6			
793	2062	6.6	-13.1			
750	2516	3.5	-12.4			
725	2790	1.6	-12.6			
700	3073	1.9	-15.6			

Ascn #136 22 October 1968 0641 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	136					
964	428	2.1	1.3	Sfc	080	1.3
953	521	10.2	2.8	150	199	2.2
950	547	10.3	1.6	300	223	5.1
916	851	12.0	-10.2			
900	998	12.1	-10.2	500	131	1.4
862	1359	12.5	- 8.6	1000	223	8.5
850	1476	11.5	- 8.3	1500	221	9.5
800	1978	7.3	- 7.5	2000	233	12.2
786	2123	6.1	- 7.8			
750	2506	5.7	- 8.9			
730	2727	5.5	- 9.5			
700	3068	2.5	-12.5			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #137 22 October 1968 1446 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	69					
959	428	20.9	6.1	Sfc	180	7.9
950	508	19.6	3.7	150	199	4.7
920	782	16.1	- 2.4	300	215	9.4
900	968	14.7	- 4.6			
850	1447	11.5	- 9.5	500	186	6.2
817	1776	9.3	-13.8	1000	217	16.9
800	1951	10.3	-13.7	1500	217	14.6
798	1971	10.5	-13.5	2000	225	20.5
750	2484	7.0	-15.7	2500	231	24.1
700	3047	3.6	-17.9			

Ascn #138 23 October 1968 0646 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	107					
962	428	6.2	2.6	Sfc	240	3.6
950	530	5.6	0.3	150	255	5.6
941	608	5.2	- 1.2	300	260	9.5
900	969	2.0	- 1.4			
864	1296	- 0.7	- 1.6	500	252	3.4
850	1427	- 1.1	- 3.4	1000	272	11.3
834	1578	- 1.6	- 5.4	1500	281	16.5
809	1821	0.7	-16.6	2000	261	22.7
800	1911	0.1	-17.1	2500	273	25.2
750	2424	- 3.5	-22.2			
749	2435	- 3.6	-22.3			
700	2973	0.8	-20.2			

Ascn #139 23 October 1968 1309 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	116					
963	428	12.7	2.8	Sfc	250	5.4
950	541	11.4	1.6	150	275	6.1
900	988	6.6	- 2.2	300	260	7.5
850	1452	1.6	- 6.7			
827	1672	- 0.8	- 8.7	500	265	5.7
800	1936	- 2.0	-14.7	1000	259	10.4
780	2138	0.6	-23.9	1500	269	6.9
767	2273	0.6	-23.9	2000	267	10.4
750	2454	2.6	-22.2	2500	269	17.7
700	3011	2.2	-21.8	3000	244	21.7

Ascn #140 24 October 1968 0642 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	125					
964	428	5.4	3.6	Sfc		0.0
950	547	8.3	1.4	150	129	4.3
940	635	10.2	- 0.8	300	136	5.0
900	994	7.2	- 3.6			
851	1451	3.4	- 6.0	500	122	2.1
850	1460	3.3	- 6.1	1000	147	5.3
814	1809	0.2	- 7.3	1500	224	3.9
800	1948	0.0	-11.1	2000	237	7.3
776	2191	- 0.6	-20.8	2500	231	16.3
751	2452	- 1.6	- 3.4			
750	2463	- 1.7	- 3.9			
726	2721	- 2.7	-12.7			
700	3009	- 4.2	- 5.6			

Ascn #141 24 October 1968 1329 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	110					
963	428	11.6	4.1	Sfc	100	5.4
950	541	10.4	3.0	150	106	4.5
900	986	6.0	- 1.8	300	113	6.6
892	1059	5.3	- 2.7			
872	1244	5.7	- 3.1	500	101	4.5
850	1452	3.9	- 2.7	1000	126	7.0
800	1940	- 0.6	- 2.8	1500	159	3.9
794	2000	- 1.2	- 3.2	2000	171	3.7
767	2276	- 2.3	- 3.5			
750	2453	- 2.6	- 4.7			
736	2603	- 2.7	- 6.0			
700	2998	- 5.2	- 9.1			

Ascn #142 25 October 1968 0644 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	67					
957	428	5.4	4.5	Sfc	240	1.8
950	487	5.1	4.2	150	250	3.3
918	766	4.0	2.9	300	266	5.1
900	927	3.0	1.8			
850	1386	0.0	- 1.2	500	251	2.0
830	1576	- 1.2	- 2.6			
800	1869	- 3.0	- 5.3			
796	1908	- 3.3	- 5.6			
765	2220	- 7.1	- 7.1			
750	2375	- 6.9	- 9.8			
741	2469	- 6.8	-11.4			
700	2910	-10.5	-13.6			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #143 26 October 1968 0643 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	90					
959	428	1.8	0.7	Sfc	240	3.1
950	503	1.4	0.0	150	270	5.6
910	849	0.1	- 3.1	300	278	11.2
900	937	- 0.5	- 3.6			
850	1390	- 4.1	- 5.9	500	268	2.5
829	1587	- 5.6	- 7.0	1000	292	17.3
804	1826	- 7.3	-11.7	1500	304	20.2
800	1865	- 7.5	-11.5	2000	302	11.1
754	2323	-10.5	-10.5			
750	2364	-10.7	-12.0			
728	2593	-11.9	-22.0			
700	2893	-12.8	-24.2			

Ascn #144 26 October 1968 1232 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	107					
962	428	3.9	1.4	Sfc	260	9.8
950	529	2.1	- 0.4			
929	708	- 0.7	- 3.4			
902	943	- 3.3	- 3.5			
900	960	- 3.5	- 3.9			
850	1410	- 6.0	- 8.7			
836	1539	- 6.9	-10.3			
800	1881	- 9.0	-13.3			
777	2106	-10.5	-15.6			
750	2378	-12.4	-18.4			
700	2901	-16.0	-24.1			

Ascn #145 28 October 1968 0604 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	47					
954	428	1.3	0.2	Sfc		0.0
950	461	3.8	0.5	150	230	6.4
947	487	5.3	0.6	300	240	10.4
916	759	6.0	- 1.8			
900	903	4.9	- 3.3	500	227	3.4
883	1058	3.7	- 5.0	1000	251	11.5
850	1365	0.9	- 6.9	1500	258	12.1
800	1848	- 3.5	- 9.3	2000	260	18.3
773	2119	- 4.5	-10.9			
750	2356	- 6.1	-10.5			
741	2450	- 6.9	-10.6			
700	2892	- 9.2	-17.3			

Ascn #146 29 October 1968 0612 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	42					
954	428	3.9	2.4	Sfc	270	7.2
950	462	3.6	2.2			
908	826	0.9	0.9			
900	897	0.1	0.1			
884	1041	- 1.2	- 1.2			
868	1186	- 0.5	- 2.4			
850	1353	- 1.7	- 5.2			
835	1494	- 2.8	- 7.5			
800	1832	- 5.2	- 8.6			
785	1980	- 6.3	- 9.0			
762	2212	- 8.0	-13.1			
750	2335	- 9.0	-13.5			
735	2491	-10.2	-14.3			
700	2866	-12.3	-16.0			

Ascn #147 29 October 1968 1345 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	72					
958	428	5.0	0.1	Sfc	300	8.5
950	496	4.1	- 1.8			
928	685	2.0	- 7.3			
900	931	- 0.3	- 7.1			
862	1274	- 3.5	- 7.1			
850	1385	- 4.0	- 7.9			
848	1403	- 4.1	- 8.0			
800	1859	- 8.5	-10.4			
797	1888	- 8.8	-10.4			
774	2114	-10.4	-11.1			
750	2356	-10.7	-11.0			
743	2428	-10.8	-10.8			
700	2884	-13.9	-15.2			

Ascn #148 30 October 1968 0619 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	145					
966	428	0.8	- 0.6	Sfc	220	1.3
955	519	0.6	- 2.6	150	255	3.8
950	561	0.2	- 2.6	300	280	6.3
917	843	- 1.8	- 1.8			
900	992	- 2.9	- 2.9	500	232	2.3
850	1442	- 6.0	- 6.0	1000	303	9.4
800	1914	- 9.2	- 9.3	1500	300	9.1
770	2208	-11.3	-11.4			
750	2410	-12.6	-13.9			
733	2584	-13.9	-16.1			
700	2933	-15.8	-16.6			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #149 30 October 1968 1240 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	164					
968	428	3.8	1.5	Sfc		0.0
952	562	2.4	- 3.3	150	331	4.0
950	579	2.1	- 3.5	300	294	5.9
900	1013	- 1.2	- 5.8			
894	1066	- 1.5	- 6.0	500	340	3.0
850	1465	- 5.0	- 8.6	1000	286	7.4
807	1870	- 8.7	-11.1	1500	297	9.6
800	1937	- 9.1	-11.8			
750	2434	-12.1	-16.1			
724	2703	-13.7	-18.5			

Ascn #150 31 October 1968 0619 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	204					
972	428	- 5.4	- 8.5	Sfc	090	0.5
963	501	1.3	1.3	150	233	1.1
950	610	0.9	- 3.5	300	271	2.4
948	627	0.8	- 4.2			
900	1042	- 1.9	- 6.4	500	174	0.6
883	1194	- 2.9	- 7.0	1000	291	4.9
859	1413	- 0.7	-15.0	1500	308	9.7
850	1497	- 0.9	-15.5	2000	306	13.6
800	1980	- 1.5	-15.3			
760	2388	- 1.9	-15.3			
750	2493	- 1.9	-13.7			
735	2654	- 1.9	-11.4			
700	3041	- 3.3	-16.9			

Ascn #151 31 October 1968 1349 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	177					
970	428	10.6	0.0	Sfc	200	1.7
950	600	8.9	- 1.7	150	253	1.8
900	1043	4.2	- 6.6	300	262	2.1
862	1391	0.5	-10.3			
850	1504	2.3	-13.9	500	222	1.6
840	1600	3.8	-19.7	1000	275	1.8
827	1726	4.2	-20.2	1500	293	9.2
806	1935	2.5	-12.5	2000	315	10.4
800	1995	2.5	-13.3	2500	318	18.3
783	2168	2.5	-18.2			
753	2485	3.6	-18.5			
750	2517	3.5	-18.6			
700	3074	0.8	-13.6			

Ascn #152 1 November 1968 0625 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	175					
970	428	5.6	3.3	sfc		0.0
965	470	9.9	4.3	150	219	6.1
953	574	11.9	7.2	300	245	9.2
950	600	11.9	7.2			
939	698	11.9	7.8	500	212	2.7
924	833	14.0	12.6	1000	271	12.6
906	998	12.8	10.5	1500	289	11.7
900	1053	12.5	10.8	2000	284	15.2
881	1232	11.9	11.3	2500	300	10.5
855	1481	9.9	9.5			
850	1530	9.4	8.3			
843	1598	8.7	6.7			
818	1846	6.8	5.7			
800	2028	5.6	5.0			
794	2089	5.1	4.5			
778	2256	6.5	- 2.6			
776	2277	8.1	- 6.0			
750	2557	7.0	- 8.1			
740	2667	6.5	- 9.4			
700	3120	3.6	-11.5			

Ascn #153 1 November 1968 1320 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	140					
967	428	22.2	15.8	Sfc	210	6.7
950	580	20.1	12.9	150	243	5.0
924	818	17.2	8.4	300	237	6.2
900	1040	14.6	7.9			
882	1210	12.8	7.7	500	228	5.7
850	1520	12.8	5.2	1000	235	8.8
842	1599	12.8	4.2	1500	271	13.8
822	1800	11.4	0.0			
803	1996	15.0	- 5.9			
800	2028	14.6	- 6.3			
750	2568	10.7	-10.7			
700	3138	6.4	-14.9			

Ascn #154 2 November 1968 0616 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	148					
967	428	13.1	11.9	Sfc	210	2.7
950	576	12.1	11.0	150	255	5.7
905	979	9.6	9.3	300	273	9.5
900	1025	9.0	7.8			
885	1164	7.8	4.0	500	226	3.9
864	1362	8.7	5.3			
850	1497	7.8	6.1			
843	1565	7.3	6.4			
822	1772	7.8	- 3.6			
800	1995	6.5	- 5.8			
770	2307	4.9	- 8.5			
750	2521	3.5	- 8.8			
746	2565	3.2	- 9.1			
734	2696	2.4	- 6.2			
700	3077	0.5	-15.9			

Table 10 (continued). RADIOSONDE MEASUREMENTS

Ascn #155 2 November 1968 1311 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	139					
967	428	17.8	8.9	Sfc	230	7.2
950	578	15.6	6.6	150	258	5.4
900	1030	9.0	- 1.4	300	257	7.7
873	1281	7.0	- 2.1			
850	1500	6.3	- 6.3	500	245	6.2
833	1665	5.7	-10.5	1000	264	8.0
800	1994	4.0	-15.3	1500	282	11.0
784	2158	3.2	-19.5	2000	276	21.3
760	2410	3.8	-18.4	2500	285	27.3
750	2518	3.3	-16.4	3000	273	24.1
722	2825	1.7	-12.8			
700	3073	- 0.1	-14.1			

Ascn #156 4 November 1968 0613 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	131					
965	428	6.7	5.6	Sfc	070	2.7
950	556	7.0	4.6	150	103	5.8
924	784	7.7	3.1	300	138	8.6
912	892	8.2	4.2			
900	1001	7.7	4.5	500	081	3.7
885	1139	7.3	4.6	1000	168	7.4
857	1402	5.8	1.7	1500	225	7.0
850	1469	5.7	1.8			
827	1693	5.3	1.7			
800	1964	4.9	- 1.5			
794	2025	4.7	- 2.4			
771	2263	2.2	- 3.0			
750	2486	0.7	- 2.0			
735	2647	- 0.3	- 1.1			
700	3036	- 2.5	- 2.9			

Ascn #157 5 November 1968 0606 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	109					
962	428	5.7	5.2	Sfc	070	1.8
950	530	7.0	6.7			
934	670	8.8	8.8			
920	795	9.6	8.5			
900	977	9.8	8.4			
850	1449	7.4	6.6			
814	1803	5.5	5.3			
800	1945	4.0	4.0			
786	2088	2.5	2.5			
767	2285	2.3	- 0.9			
750	2466	0.8	- 1.4			
728	2704	- 1.1	- 1.9			
700	3015	- 3.2	- 4.0			

Ascn #158 6 November 1968 0610 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	105					
962	428	9.9	8.5	Sfc	100	1.8
950	531	9.3	7.6	150	134	5.0
949	540	9.3	7.6	300	147	8.6
927	734	8.0	8.0			
909	896	9.3	9.3	500	115	3.2
902	960	9.5	8.4	1000	183	9.4
900	978	9.4	8.0			
885	1117	8.6	6.4			
864	1315	8.0	6.0			
850	1449	7.0	5.5			
840	1546	6.3	5.4			
828	1664	5.5	4.4			
803	1914	4.8	0.0			
800	1944	4.6	- 0.1			
764	2317	1.0	- 2.9			
750	2465	0.0	- 2.3			
740	2572	- 0.5	- 1.9			
700	3014	- 3.3	- 4.1			

Ascn #159 7 November 1968 0655 EST

P(mb)	Z(m)	T(°C)	Td(°C)	H(m)	D(°)	S(mps)
1000	---					
958	428	10.0	----	Sfc	120	1.8
950	497	9.7	----			
921	753	8.6	----			
900	943	7.5	----			
883	1100	6.8	----			
857	1345	6.0	----			
850	1412	5.5	----			
823	1675	4.0	----			
813	1774	3.4	----			

POWER PLANT OPERATIONAL PARAMETERS

Analyses of the Keystone coal supply are presented in Table 11. Although two individual mine sources supplied coal, the data for each source and experiment day are averaged to obtain one analysis per each of the four 1968 series. Parameters include moisture, volatile matter, fixed carbon, ash, sulfur, and heat value. The sulfur content is a close approximation to the "as burned" basis with allowance made for rejection of sulfur-containing pyrites. The heat value of the coal is presented in English as well as metric units because of common usage.

Table 11. COAL ANALYSES

Keystone Station March 1968 Series		Keystone Station May 1968 Series	
Moisture (%)	3.20	Moisture (%)	3.32
Volatile Matter (%)	29.94	Volatile Matter (%)	30.19
Fixed Carbon (%)	48.08	Fixed Carbon (%)	47.81
Ash (%)	16.66	Ash (%)	16.48
Sulfur (%)	2.12	Sulfur (%)	2.20
Btu per Pound	12,093	Btu per Pound	12,053
Calories per Gram	6,718	Calories per Gram	6,695

Keystone Station July 1968 Series		Keystone Station October 1968 Series	
Moisture (%)	3.83	Moisture (%)	3.72
Volatile Matter (%)	29.65	Volatile Matter (%)	29.27
Fixed Carbon (%)	48.67	Fixed Carbon (%)	47.36
Ash (%)	15.67	Ash (%)	17.29
Sulfur (%)	2.18	Sulfur (%)	2.36
Btu per Pound	12,081	Btu per Pound	11,847
Calories per Gram	6,711	Calories per Gram	6,581

Table 12 contains the hourly operational data of the Keystone Station. Included are values of plant load, stack gas exit temperature and velocity, temperature difference at stack top, SO_2 emission, and heat emission. The nominal period

of record extends up to 2 hours before and 1 hour after helicopter or bubbler SO_2 measurements on each series day. When both stacks were emitting, a separate listing is included for each.

The plant load was obtained from the station records and includes total electrical output generated during each hour. Temperature difference at stack top is the difference between stack exit temperature and the 250-meter ambient temperature from the helicopter profile. The stack exit temperature was not monitored; instead, a correction of 13.9°C (25°F) was subtracted from the effluent temperature leaving the air heaters.

Equations to calculate the remaining three parameters are now presented.[12] The units of the formulas are British as all plant data were so supplied; after calculations were performed, conversion was made to metric units.

The stack gas exit velocity in ft per sec was calculated hourly from the following equation:

$$V = \frac{T_C}{3600\ A_S}\left[H_2O\left(\frac{359}{18}\right) + CO_2\left(\frac{359}{44}\right) + N_2\left(\frac{359}{28}\right) + SO_2\left(\frac{359}{64}\right) + A_e\left(\frac{359}{29}\right)\right]\frac{t_s + 460}{t_a + 460}$$

where T_C = hourly coal consumption in lbs per hr per unit.
A_S = stack area = 581.42 sq ft for Keystone.
t_s = hourly gas temperature leaving stack in °F.
t_a = hourly ambient temperature in °F.
460 = conversion to Rankine temperature scale.
3600 = sec per hr.
H_2O, CO_2, N_2 and SO_2 = series average in lbs per lb of coal as products of combustion.
A_e = series average excess air in lbs per lb of coal required for combustion.
Denominators in parentheses are molecular weights of respective gaseous constituents in whole grams per mole.
359 = conversion factor to British units calculated as follows:

$$\frac{22.414 \text{ liters/mole}}{28.317 \text{ liters/ft}^3} \times 453.59 \text{ grams/lb} = 359 \frac{\text{grams ft}^3}{\text{lb mole}}$$

SO_2 emission from each unit in tons per hr was calculated hourly by means of this formula:

$$SO_2 = \frac{T_C \times \%\ S \times 2}{2000}$$

where T_C = hourly coal consumption in lbs per hr per unit.
% S = series average percent sulfur in fuel.
2 = parts sulfur per parts oxygen in SO_2.
2000 = lbs per ton.

The final parameter, stack heat emission in Btu per sec, was computed from the following equation:

$$Qh = \frac{T_c}{3600} \times \% DG \times HV \times \frac{(t_s - t_a)}{(t_g - t_a)}$$

where T_c = hourly coal consumption in lbs per hr per unit.
% DG = hourly percent dry gas loss.
HV = series average heat value of fuel in Btu per lb.
t_s = hourly gas temperature leaving stack in °F.
t_g = hourly gas temperature leaving air heaters in °F.
t_a = hourly ambient temperature in °F.

Although hourly coal consumption is not included in this volume, it can be approximated using the ratios of 0.742 and 0.761 lbs of coal per kilowatt hour generated in units #1 and #2 respectively. This converts to 3.9×10^{-4} and 4.0×10^{-4} grams/calorie for units #1 and #2.

Table 12. PLANT OPERATIONAL DATA

Symbols

#1 or #2	:	Designation of unit in operation.
Time (EST)	:	Hour designating preceding 60 minutes.
Load (mw)	:	Total hourly generation to nearest whole megawatt.
T (°C)	:	Stack gas exit temperature in whole degrees Centigrade.
DT (°C)	:	Difference in whole degrees Centigrade between stack gas exit temperature and ambient temperature at 250 meters above stack base elevation from helicopter profile.
Vel (mps)	:	Stack gas exit velocity in meters per second to nearest tenth.
SO_2 (g/s)	:	Stack SO_2 emission in whole grams per second.
Cal/s x 10^6	:	Stack heat emission in millions of calories per second to nearest tenth.

Table 12. PLANT OPERATION DATA

Keystone #1 14 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	570	103	112	13.0	2243	16.8
0600	770	112	121	18.0	3049	24.4
0700	810	116	125	19.1	3200	26.6
0800	800	117	127	18.9	3150	26.5
0900	830	118	126	19.5	3276	27.3
1000	810	118	125	19.1	3200	26.6
1100	860	123	129	20.3	3402	28.8
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 15 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	570	105	101	12.4	2243	15.0
0600	770	114	110	17.3	3049	22.2
0700	780	118	114	17.6	3074	23.2
0800	750	119	114	16.9	2974	22.4
0900	800	121	115	18.0	3150	24.1
1000	810	124	119	18.1	3200	25.2
1100	840	127	119	19.1	3326	26.1
1200	850	128	119	19.5	3352	26.4
1300	720	121	110	16.0	2848	20.8
1400						
1500						
1600						
1700						

Keystone #1 16 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	480	108	100	10.5	1890	12.6
0600	470	107	100	10.1	1865	12.2
0700	460	108	100	10.0	1814	12.1
0800	480	109	100	10.5	1890	12.6
0900	490	108	101	10.6	1940	12.9
1000	480	108	100	10.4	1890	12.6
1100	460	108	100	10.0	1814	12.1
1200	450	108	99	9.7	1789	11.6
1300						
1400						
1500						
1600						
1700						

Keystone #1 18 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	600	106	106	13.3	2369	16.6
0600	760	116	115	17.3	2999	22.9
0700	780	118	118	17.8	3074	24.1
0800	820	119	119	18.7	3226	25.6
0900	740	119	118	16.9	2923	22.8
1000	820	121	118	18.7	3226	25.3
1100	850	126	120	19.4	3352	26.7
1200	860	128	120	19.7	3402	27.0
1300	770	126	116	17.4	3049	23.6
1400						
1500						
1600						
1700						

Keystone #1 19 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	590	105	99	12.7	2318	15.2
0600	770	116	110	17.1	3049	22.1
0700	780	119	112	17.4	3074	22.8
0800	720	118	112	16.1	2848	21.1
0900	810	119	112	18.1	3200	23.8
1000	790	122	114	17.7	3125	23.5
1100	860	127	117	19.2	3402	26.3
1200	820	128	116	18.5	3226	25.0
1300	780	129	116	17.6	3074	23.2
1400						
1500						
1600						
1700						

Keystone #1 20 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	599	105	92	12.5	2344	14.3
0600	768	119	106	16.7	2999	21.1
0700	775	121	107	16.8	3024	21.6
0800	778	123	112	17.3	3049	22.7
0900	775	123	112	17.1	3024	22.5
1000	805	126	113	17.6	3150	23.6
1100	850	127	112	18.8	3326	24.8
1200	854	128	112	18.8	3352	25.0
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 25 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	616	103	103	13.7	2444	16.7
0600	782	124	124	18.2	3100	25.4
0700	785	118	117	18.0	3125	24.3
0800	783	119	119	18.0	3100	24.4
0900	781	122	121	18.0	3100	24.9
1000	846	124	122	19.6	3352	27.2
1100	851	126	120	19.6	3377	26.9
1200	845	127	120	19.4	3352	26.6
1300	791	126	117	17.9	3150	24.3
1400	759	124	114	17.1	3024	22.7
1500	764	124	113	17.2	3024	22.7
1600						
1700						

Keystone #1 26 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	614	111	102	13.3	2419	16.3
0600	749	118	109	16.6	2948	21.2
0700	768	122	112	17.1	3024	22.4
0800	755	122	114	16.8	2948	22.1
0900	746	121	112	16.6	2923	21.8
1000	805	124	113	17.9	3150	23.6
1100	769	129	116	17.2	3024	23.2
1200	750	127	114	16.6	2948	22.2
1300	747	127	112	16.5	2923	21.8
1400						
1500						
1600						
1700						

Keystone #1 27 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	691	114	104	15.2	2747	18.9
0600	768	122	111	17.2	3049	22.5
0700	767	122	111	17.1	3049	22.5
0800	754	121	110	16.8	2999	21.9
0900	747	122	110	16.6	2974	21.5
1000	771	124	112	17.1	3049	22.5
1100	827	131	115	18.6	3276	25.1
1200	832	133	116	18.7	3301	25.3
1300	783	128	109	17.4	3100	22.5
1400						
1500						
1600						
1700						

Keystone #1 28 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	670	112	111	14.3	2621	16.9
0600	777	121	106	16.9	3049	21.5
0700	776	121	106	16.9	3049	21.4
0800	786	122	109	17.3	3074	22.3
0900	780	124	111	17.2	3074	22.5
1000	814	129	114	18.0	3200	24.2
1100	813	133	115	18.1	3200	24.4
1200	807	132	113	17.8	3175	23.7
1300						
1400						
1500						
1600						
1700						

Keystone #1 29 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	673	116	102	14.4	2646	17.9
0600	767	124	110	17.1	3024	22.3
0700	773	126	112	17.1	3049	22.5
0800	782	127	112	17.3	3074	22.9
0900	779	129	114	17.2	3074	23.1
1000	798	131	114	17.6	3150	23.7
1100	849	134	116	18.9	3326	25.6
1200	863	137	117	19.2	3402	26.4
1300	852	137	115	18.9	3352	25.7
1400						
1500						
1600						
1700						

Keystone #1 30 March 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	679	112	104	15.1	2722	18.7
0600	758	118	110	17.1	3049	22.2
0700	774	119	111	17.5	3100	22.8
0800	777	119	112	17.7	3125	23.1
0900	768	121	114	17.6	3074	23.3
1000	744	122	113	16.9	2974	19.6
1100	766	123	112	17.3	3074	22.9
1200	772	125	112	17.4	3100	23.1
1300	764	129	114	17.4	3074	23.3
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 1 April 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	698	113	113	15.4	2696	20.2
0600	768	123	123	17.5	2974	24.2
0700	779	121	121	17.6	3024	24.3
0800	780	121	121	17.6	3024	24.2
0900	781	120	120	17.6	3024	24.1
1000	805	121	120	18.2	3125	24.8
1100	844	124	119	19.2	3276	26.8
1200	852	125	124	19.4	3301	27.1
1300	808	123	122	18.4	3125	25.4
1400						
1500						
1600						
1700						

Keystone #1 2 April 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	634	107	105	13.9	2495	17.3
0600	744	116	114	16.7	2923	22.1
0700	735	118	116	16.6	2898	22.2
0800	725	118	116	16.4	2848	21.9
0900	735	119	117	16.8	2898	22.5
1000	809	124	120	18.3	3175	25.5
1100	885	129	125	20.5	3478	29.1
1200	852	128	123	19.6	3352	27.0
1300	803	127	120	18.3	3150	25.4
1400						
1500						
1600						
1700						

Keystone #1 3 April 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	577	107	96	12.1	2243	14.3
0600	740	116	106	15.9	2873	20.0
0700	781	122	112	17.0	3024	22.4
0800	782	122	111	17.0	3024	22.2
0900	784	123	111	17.1	3024	22.4
1000	848	127	115	18.6	3276	25.1
1100	872	132	117	19.2	3377	26.2
1200	861	133	117	19.0	3326	25.9
1300	778	137	120	17.5	3049	24.3
1400						
1500						
1600						
1700						

Keystone #1 4 April 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	590	113	96	12.9	2394	15.2
0600	719	124	106	16.0	2898	20.5
0700	730	127	110	16.5	2948	21.5
0800	730	128	114	16.6	2948	22.3
0900	733	127	111	16.6	2974	21.9
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 5 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	590	117	112	13.0	2369	16.9
0500	522	113	108	11.4	2092	14.4
0600	525	113	108	11.5	2117	14.5
0700	594	118	112	13.0	2394	17.0
0800	727	126	120	16.3	2923	22.3
0900	820	131	125	18.5	3301	26.2
1000	872	134	128	20.0	3503	28.6
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 6 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	609	112	99	12.8	2470	15.5
0500	802	122	109	17.5	3251	22.7
0600	827	124	111	18.2	3352	23.7
0700	826	124	112	18.2	3352	23.9
0800	833	125	112	18.4	3377	24.3
0900	864	127	112	19.1	3503	25.0
1000	878	128	112	19.4	3578	25.6
1100	856	127	109	18.7	3478	24.3
1200	817	126	106	17.7	3326	22.5
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 7 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	596	109	105	12.8	2369	15.9
0500	782	119	115	17.1	3125	22.8
0600	835	122	118	18.4	3326	24.0
0700	833	122	119	18.5	3326	25.2
0800	830	123	119	18.5	3301	25.0
0900	849	124	118	18.7	3377	25.4
1000	880	126	118	19.4	3503	26.3
1100	854	126	116	18.7	3402	25.1
1200	829	126	113	18.0	3301	23.9
1300						
1400						
1500						
1600						
1700						

Keystone #1 8 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	668	123	112	14.4	2671	19.0
0500	831	132	121	18.4	3326	25.5
0600	846	133	122	18.8	3377	26.2
0700	859	134	124	19.1	3427	27.0
0800	862	135	122	19.1	3452	26.8
0900	882	136	121	19.5	3528	27.1
1000	892	137	120	19.6	3553	27.2
1100	886	138	120	19.5	3528	27.0
1200	856	139	116	18.7	3427	25.4
1300						
1400						
1500						
1600						
1700						

Keystone #1 9 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	542	122	107	11.7	2192	15.0
0500	778	135	121	17.5	3125	24.3
0600	859	139	125	19.5	3503	27.9
0700	865	140	126	19.8	3503	28.1
0800	867	141	127	19.8	3528	28.5
0900	901	143	129	20.7	3654	30.0
1000	903	143	129	20.8	3679	30.1
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 10 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	645	128	115	14.3	2621	19.3
0500	837	139	126	19.1	3402	27.3
0600	840	139	126	19.2	3402	27.4
0700	330	139	126	19.0	3377	27.0
0800	830	139	127	19.0	3377	27.2
0900	834	139	127	19.1	3377	27.4
1000	803	138	125	18.3	3251	26.1
1100	789	138	125	18.0	3251	25.6
1200	794	141	126	18.1	3226	26.0
1300						
1400						
1500						
1600						
1700						

Keystone #1 11 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	540	118	104	11.3	2167	14.4
0500	528	118	104	11.2	2117	13.9
0600	531	118	104	11.3	2117	14.0
0700	533	118	105	11.4	2142	14.3
0800	533	119	107	11.5	2142	14.6
0900						
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 21 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10⁶
0400	862	135	127	19.5	3452	27.9
0500	872	136	127	19.8	3503	28.4
0600	873	136	127	19.8	3503	28.5
0700	878	136	128	19.9	3528	28.7
0800	874	136	127	19.8	3503	28.3
0900	884	132	123	19.8	3553	27.7
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 22 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500						
0600						
0700						
0800						
0900						
1000	883	133	125	20.3	3629	28.9
1100	894	134	126	20.6	3679	29.4
1200	865	136	126	20.1	3553	28.5
1300	829	133	122	19.0	3402	26.4
1400	833	133	121	18.9	3427	26.4
1500	843	133	121	19.2	3452	26.6
1600	840	133	124	19.1	3452	26.6
1700						

Keystone #1 23 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	585	111	98	12.7	2419	15.2
0500	826	126	112	18.6	3427	24.5
0600	849	131	117	19.4	3528	26.4
0700	851	131	119	19.4	3528	26.7
0800	854	130	119	19.6	3553	26.8
0900	922	136	123	21.3	3830	29.9
1000	922	137	124	21.3	3830	30.2
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 25 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x106
0400	534	108	100	15.9	2192	14.0
0500	590	115	106	13.1	2444	16.5
0600	842	129	121	19.4	3478	26.7
0700	905	134	126	20.4	3730	29.6
0800	900	134	127	21.0	3704	30.0
0900	884	133	124	20.5	3654	28.9
1000	906	135	125	21.0	3730	29.7
1100	909	137	125	21.0	3755	29.8
1200	808	132	124	18.3	3326	25.1
1300	639	124	108	14.1	2646	18.1
1400	633	124	107	13.9	2621	17.8
1500	630	124	107	13.9	2596	17.7
1600						
1700						

Keystone #1 26 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	600	111	97	13.0	2495	15.4
0500	770	122	109	17.2	3200	22.2
0600	826	129	115	18.7	3427	25.2
0700	812	129	115	18.4	3377	24.7
0800	812	131	115	18.3	3377	24.7
0900	819	132	115	18.4	3402	24.8
1000	842	135	116	19.1	3503	25.9
1100	853	139	120	19.5	3553	27.0
1200	834	139	119	18.9	3452	26.2
1300	791	138	117	17.9	3276	24.4
1400						
1500						
1600						
1700						

Keystone #1 27 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	757	125	116	17.1	3125	23.0
0500	862	136	126	20.1	3553	28.5
0600	857	135	126	19.8	3528	28.2
0700	841	133	125	19.4	3452	27.5
0800	860	133	126	20.0	3528	28.3
0900	874	134	127	20.3	3604	29.1
1000	912	137	130	21.4	3755	31.1
1100	910	138	130	21.3	3755	31.1
1200	852	134	126	19.9	3503	28.3
1300						
1400						
1500						
1600						
1700						

Keystone #1 28 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x106
0400	535	106	97	11.5	2192	13.7
0500	533	108	100	12.0	2192	16.2
0600	740	116	107	16.4	3049	20.8
0700	880	132	123	20.3	3604	28.3
0800	878	134	125	20.3	3604	28.7
0900	893	134	125	20.6	3679	29.3
1000	891	136	126	20.7	3654	29.4
1100	871	134	124	19.9	3578	28.2
1200	831	132	121	18.9	3402	26.3
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 29 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	540	111	101	11.6	2192	14.1
0500	539	110	100	11.5	2192	14.0
0600	683	114	104	14.8	2772	18.4
0700	841	127	118	18.9	3427	25.7
0800	817	129	121	18.5	3326	27.3
0900	809	128	117	18.1	3276	24.5
1000	861	132	120	19.4	3503	26.7
1100	866	136	121	19.5	3528	27.2
1200	819	134	119	18.3	3326	25.1
1300	807	133	115	17.9	3276	24.1
1400						
1500						
1600						
1700						

Keystone #1 30 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	533	114	101	11.9	2268	14.6
0500	576	115	102	12.9	2444	15.9
0600	777	124	111	17.9	3301	23.4
0700	850	132	119	20.0	3604	27.4
0800	849	132	119	19.8	3604	27.3
0900	842	133	120	19.8	3578	27.3
1000	867	134	120	20.4	3679	28.1
1100	848	134	120	19.9	3604	27.6
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 31 May 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	506	111	99	11.1	2117	13.3
0500	587	114	103	13.0	2444	16.1
0600	770	126	114	17.5	3200	23.3
0700	833	132	119	19.2	3478	26.5
0800	840	133	121	19.4	3503	27.0
0900	850	133	120	19.6	3553	27.1
1000	868	136	122	20.1	3629	28.1
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 1 June 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500						
0600	819	124	110	18.3	3402	23.9
0700	846	126	112	19.0	3503	25.3
0800	845	126	112	19.0	3503	24.9
0900	858	127	114	19.3	3553	25.8
1000	876	132	117	19.9	3629	27.1
1100	874	132	116	19.8	3629	26.8
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 29 June 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	561	121	100	12.1	2268	14.7
0500	822	138	117	18.6	3326	25.3
0600	822	139	117	18.6	3326	25.6
0700	825	133	112	18.4	3352	24.2
0800	826	134	113	18.4	3352	24.5
0900	830	135	113	18.5	3377	24.6
1000	832	137	114	18.5	3377	24.8
1100	846	138	114	18.8	3427	25.3
1200	875	142	116	19.6	3553	26.7
1300						
1400						
1500						
1600						
1700						

Keystone #1 30 June 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	562	132	107	12.5	2293	15.9
0500	792	142	117	17.9	3251	24.5
0600	798	146	120	18.2	3276	25.4
0700	785	147	121	18.0	3200	25.2
0800	784	148	123	18.0	3200	25.5
0900	746	149	122	17.0	3049	24.1
1000	723	148	121	16.5	2948	23.1
1100	728	149	120	16.6	2974	23.3
1200	733	151	121	16.7	2999	23.6
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 1 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	540	129	105	12.1	2243	15.2
0500	783	141	116	18.0	3251	24.4
0600	825	144	120	19.1	3427	26.6
0700	842	147	121	19.5	3503	27.5
0800	844	149	124	19.7	3503	28.1
0900	858	153	125	20.2	3578	28.9
1000	899	154	126	21.2	3755	30.4
1100	890	155	125	20.8	3704	30.0
1200	857	157	125	20.0	3578	29.0
1300	863	158	125	20.1	3604	29.2
1400						
1500						
1600						
1700						

Keystone #1 3 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	535	119	101	11.8	2218	14.6
0500	595	128	110	13.4	2470	17.7
0600	814	140	121	18.9	3377	26.4
0700	826	141	122	19.3	3427	26.9
0800	826	138	119	19.2	3427	26.3
0900	834	138	120	19.3	3452	26.8
1000	827	142	122	19.3	3427	27.1
1100	824	143	122	19.2	3402	27.0
1200	848	145	123	19.8	3503	28.0
1300						
1400						
1500						
1600						
1700						

Keystone #2 3 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	401	115	96	9.0	1688	10.7
0500	404	114	95	9.1	1714	12.1
0600	406	114	96	9.1	1714	10.8
0700	406	114	95	9.1	1714	10.7
0800	394	113	94	8.7	1663	10.1
0900	411	114	96	9.2	1739	10.7
1000	437	117	97	9.8	1840	11.6
1100	451	118	97	10.1	1915	11.9
1200	445	118	96	9.9	1890	11.7
1300						
1400						
1500						
1600						
1700						

Keystone #1 4 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	537	114	102	11.9	2192	14.6
0500	631	122	110	14.3	2570	18.7
0600	829	132	121	19.2	3402	26.5
0700	824	131	120	19.1	3377	26.2
0800	830	132	120	19.2	3402	26.3
0900	821	132	119	18.8	3352	25.8
1000	817	136	120	18.9	3352	26.0
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 5 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s	Cal/s x10^6
0400	582	126	109	13.1	2419	16.9
0500	815	123	106	18.4	3377	23.1
0600	836	132	115	19.3	3478	25.8
0700	834	134	116	19.2	3452	26.0
0800	835	133	116	19.2	3452	25.9
0900	826	136	116	19.1	3427	25.8
1000	817	136	115	18.7	3377	25.2
1100	799	138	116	18.3	3301	24.7
1200	781	141	118	18.0	3226	24.7
1300						
1400						
1500						
1600						
1700						

Keystone #2 5 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	331	102	85	7.4	1436	8.0
0500	404	106	89	9.2	1764	10.1
0600	402	105	88	9.1	1764	10.0
0700	400	105	87	9.1	1739	9.9
0800	413	107	89	9.4	1814	10.4
0900	409	109	90	9.3	1789	10.4
1000	408	112	91	9.3	1789	10.5
1100	413	114	92	9.4	1814	10.7
1200	414	116	92	9.4	1814	10.8
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 6 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	529	130	112	12.2	2218	16.0
0500	531	132	114	12.3	2218	16.4
0600	593	131	113	13.7	2470	18.1
0700	665	133	116	15.5	2772	20.8
0800	830	132	116	19.3	3478	26.1
0900	841	141	124	20.0	3503	28.2
1000	855	135	117	19.9	3578	27.0
1100	886	136	116	20.6	3704	27.9
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 6 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	408	113	95	9.2	1739	10.7
0500	411	112	95	9.2	1764	10.8
0600	415	112	95	9.3	1764	10.9
0700	415	112	95	9.4	1764	10.9
0800	414	113	97	9.4	1764	11.1
0900	410	113	97	9.3	1764	11.0
1000	416	114	96	9.4	1789	11.0
1100	415	114	95	9.3	1764	10.9
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 8 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	531	114	92	11.3	2167	12.8
0500	540	114	92	11.5	2192	13.0
0600	671	114	92	14.2	2722	16.2
0700	804	117	95	17.1	3276	20.1
0800	835	126	105	18.2	3402	23.0
0900	835	131	109	18.5	3402	24.0
1000	835	134	110	18.5	3402	24.2
1100	831	137	112	18.6	3377	24.5
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 8 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	409	111	89	8.8	1714	9.8
0500	406	109	87	8.8	1688	9.6
0600	407	109	87	8.7	1714	9.6
0700	408	109	87	8.8	1714	9.6
0800	407	109	88	8.8	1714	9.7
0900	457	114	92	10.0	1915	11.4
1000	460	118	94	10.1	1915	11.7
1100	447	119	95	9.8	1865	11.4
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 9 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	535	112	91	11.5	2192	12.9
0500	538	112	91	11.6	2218	13.0
0600	553	111	90	11.8	2268	13.2
0700	606	112	91	13.0	2495	14.7
0800	755	118	97	16.5	3100	19.6
0900	784	128	106	17.5	3226	22.1
1000	804	132	109	18.0	3301	23.4
1100	799	134	110	18.0	3301	23.3
1200	809	135	109	18.1	3326	23.6
1300						
1400						
1500						
1600						
1700						

Keystone #2 9 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	308	109	88	6.6	1260	7.2
0500	304	109	87	6.6	1260	7.1
0600	313	109	87	6.6	1285	7.3
0700	310	109	88	6.6	1285	7.2
0800	304	109	89	6.5	1260	7.2
0900	307	111	88	6.6	1260	8.0
1000	309	111	88	6.6	1260	7.2
1100	304	111	87	6.4	1260	7.0
1200	310	112	86	6.6	1285	7.2
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 10 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	532	110	89	11.3	2192	12.5
0500	533	109	88	11.3	2192	12.4
0600	531	109	88	11.3	2092	12.4
0700	610	109	88	13.0	2495	14.2
0800	763	113	92	16.3	3125	18.5
0900	824	125	104	18.1	3377	22.6
1000	829	133	111	18.5	3402	24.3
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 10 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	302	108	87	6.3	1235	6.9
0500	296	108	87	6.2	1210	6.8
0600	302	109	87	6.4	1235	7.0
0700	300	106	85	6.3	1235	6.7
0800	305	106	85	6.4	1235	6.9
0900	314	107	86	6.6	1285	7.2
1000	312	109	86	6.5	1285	7.1
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 14 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	481	120	97	10.6	2016	12.7
0500	484	121	98	10.7	2016	12.8
0600	475	119	96	10.4	1991	12.3
0700	482	119	99	10.6	2016	12.8
0800	474	119	97	10.4	1991	12.5
0900	620	134	111	14.2	2596	18.7
1000	766	142	119	17.8	3200	24.5
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 14 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	124	86	65	2.6	529	2.2
0500	305	107	84	6.7	1310	7.1
0600	317	107	85	7.0	1361	7.5
0700	343	109	88	7.6	1487	8.4
0800	507	122	100	11.6	2192	14.1
0900	556	124	102	12.7	2394	15.8
1000	513	123	99	11.7	2218	14.2
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 17 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	683	131	109	15.4	2822	20.0
0500	738	130	109	16.6	3049	21.5
0600	712	130	109	16.1	2948	20.7
0700	717	132	110	16.2	2974	21.2
0800	716	136	114	16.4	2974	21.9
0900	735	136	114	16.8	3049	22.4
1000	738	139	117	16.9	3049	23.1
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 17 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	516	122	101	11.4	2142	13.9
0500	519	122	100	11.5	2142	13.9
0600	510	121	100	11.3	2117	13.6
0700	572	125	104	12.7	2369	15.9
0800	605	130	109	13.7	2495	17.6
0900	608	131	109	13.7	2520	17.7
1000	611	132	110	13.8	2520	17.9
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #1 19 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	530	121	97	11.4	2142	13.5
0500	525	120	97	11.3	2117	13.3
0600	529	120	97	11.3	2142	13.4
0700	663	125	103	14.4	2696	17.9
0800	810	138	117	18.3	3276	24.8
0900	805	138	116	18.0	3276	24.6
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 19 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	502	124	101	11.1	2092	13.7
0500	539	129	106	12.1	2243	15.3
0600	601	134	111	13.6	2495	18.0
0700	612	135	113	14.0	2595	18.6
0800	599	135	114	13.7	2495	18.3
0900	604	136	114	13.9	2520	18.5
1000						
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #1 21 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	451	104	85	9.9	1940	10.7
0500	447	104	85	9.9	1915	10.6
0600	451	104	85	9.9	1940	10.6
0700	448	104	85	9.9	1915	10.5
0800	443	104	85	9.8	1915	10.5
0900	443	107	87	9.8	1915	10.7
1000	439	109	87	9.7	1890	10.6
1100	439	111	87	9.7	1890	10.7
1200	442	113	88	9.8	1890	10.8
1300						
1400						
1500						
1600						
1700						

Keystone #1 22 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	742	128	104	16.3	3049	20.4
0500	763	130	106	16.8	3125	21.4
0600	762	128	104	16.8	3125	21.1
0700	786	129	107	17.4	3226	22.3
0800	810	131	109	18.1	3326	23.4
0900	569	128	105	12.6	2344	15.8
1000	162	109	84	3.4	655	3.6
1100	000	000	00	0.0	000	0.0
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 22 July 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500						
0600	00	00	00	0.0	000	0.0
0700	66	58	36	1.3	302	0.7
0800	240	103	80	5.4	1084	5.5
0900	313	109	86	7.2	1386	7.8
1000	389	117	92	9.1	1739	10.3
1100	504	128	102	12.0	2243	14.8
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 15 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500						
0600						
0700						
0800	772	136	121	18.1	3478	24.6
0900	819	140	125	19.3	3679	26.8
1000	828	142	125	19.6	3730	27.3
1100	832	143	126	19.6	3730	27.5
1200	829	145	126	19.6	3730	27.5
1300	832	144	124	19.5	3730	27.1
1400	829	145	124	19.5	3730	27.5
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #2 16 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	826	140	124	19.5	3704	26.8
0500	820	141	124	19.3	3679	26.6
0600	827	141	124	19.5	3704	26.9
0700	831	141	124	19.6	3730	27.0
0800	831	142	125	19.6	3730	27.1
0900	833	143	126	19.6	3730	27.4
1000	827	144	125	19.4	3704	27.7
1100	829	145	124	19.4	3730	26.9
1200	832	146	124	19.3	3730	27.0
1300	835	146	123	19.4	3755	26.9
1400						
1500						
1600						
1700						

Keystone #2 17 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	834	141	122	19.7	3780	27.1
0500	832	139	119	19.5	3755	26.3
0600	829	140	121	19.4	3755	26.5
0700	828	140	124	19.3	3755	27.0
0800	831	146	127	19.6	3755	27.8
0900	827	142	122	19.3	3730	26.8
1000	829	144	124	19.4	3755	27.1
1100	826	145	123	19.3	3730	26.8
1200	829	145	122	19.2	3755	26.7
1300	829	146	122	19.2	3755	26.8
1400						
1500						
1600						
1700						

Keystone #2 18 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	826	141	121	19.0	3704	26.2
0500	840	142	122	19.0	3755	26.8
0600	839	142	122	19.4	3755	26.9
0700	837	142	123	19.4	3755	26.9
0800	834	143	124	19.3	3730	27.0
0900	827	146	126	19.4	3704	27.2
1000	834	147	126	19.4	3730	27.6
1100	835	148	127	19.4	3730	27.9
1200	833	146	124	19.2	3730	27.0
1300						
1400						
1500						
1600						
1700						

Keystone #2 20 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	756	129	119	17.6	3402	23.6
0500	750	129	119	17.5	3377	23.6
0600	748	129	119	17.5	3377	23.5
0700	749	129	119	17.5	3377	23.5
0800	765	132	122	18.0	3452	24.7
0900	767	131	123	18.0	3452	24.7
1000	745	131	121	17.3	3352	23.7
1100	744	132	121	17.3	3352	23.7
1200	740	133	120	17.3	3352	23.4
1300	799	137	123	18.7	3604	25.9
1400	830	141	126	19.5	3755	27.5
1500	821	142	125	19.3	3704	27.2
1600	828	142	124	19.4	3730	27.1
1700						

Keystone #2 21 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	827	137	129	19.8	3730	28.1
0500	826	137	129	19.7	3704	28.0
0600	827	137	129	20.0	3730	28.1
0700	807	137	129	19.3	3629	27.4
0800	788	135	127	18.7	3553	26.4
0900	824	137	129	19.7	3704	27.7
1000	819	139	131	19.6	3679	28.2
1100	826	140	131	19.7	3704	28.4
1200	826	138	128	19.6	3704	27.8
1300	826	139	128	19.6	3704	27.7
1400						
1500						
1600						
1700						

Keystone #2 22 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	419	103	92	8.8	1840	10.2
0500	520	112	101	11.2	2268	13.4
0600	528	112	101	11.4	2318	13.7
0700	539	113	102	11.6	2344	14.0
0800	542	115	104	11.7	2369	14.3
0900	708	129	117	15.8	3100	21.2
1000	818	138	126	18.7	3578	26.3
1100	858	142	128	19.7	3755	28.1
1200	851	144	129	19.6	3730	28.1
1300	853	147	130	19.7	3730	28.3
1400	880	149	131	20.3	3856	29.5
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #2 23 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	732	134	127	18.2	3452	25.8
0500	770	134	127	19.2	3629	27.2
0600	795	139	132	20.0	3755	28.9
0700	800	135	128	20.0	3780	28.4
0800	801	134	127	19.9	3780	28.1
0900	865	142	135	21.9	4082	32.1
1000	853	141	132	21.5	4032	31.1
1100	898	144	135	22.8	4234	33.5
1200	904	143	134	22.8	4259	33.3
1300	895	144	133	22.6	4208	32.8
1400						
1500						
1600						
1700						

Keystone #2 24 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	878	139	130	21.9	4133	31.4
0500	876	143	134	22.0	4108	32.2
0600	880	137	128	21.8	4133	30.9
0700	884	137	127	21.9	4158	30.9
0800	878	138	129	21.9	4133	31.2
0900	904	133	124	22.3	4259	30.7
1000	916	149	139	23.3	4309	34.8
1100	755	140	129	18.7	3553	26.8
1200	533	121	109	12.6	2495	15.9
1300						
1400						
1500						
1600						
1700						

Keystone #2 25 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400	628	126	120	14.8	2848	19.9
0500	799	135	129	19.2	3604	27.3
0600	891	133	127	21.3	4032	29.8
0700	904	138	132	21.9	4032	31.6
0800	901	140	135	21.9	4082	32.1
0900	915	143	137	22.4	4133	33.3
1000	912	144	139	22.5	4133	33.6
1100						
1200						
1300						
1400						
1500						
1600						
1700						

Keystone #2 26 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	877	143	139	21.2	3881	30.9
0600	878	143	139	21.2	3881	31.0
0700	882	138	134	20.9	3881	30.5
0800	864	136	133	20.5	3805	29.6
0900	828	133	130	21.3	3654	27.6
1000	774	121	117	17.6	3427	23.4
1100	571	116	111	13.3	2520	16.4
1200	531	114	110	11.9	2344	15.1
1300						
1400						
1500						
1600						
1700						

Keystone #2 29 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500						
0600						
0700						
0800						
0900	911	140	139	22.8	4158	33.7
1000	919	141	139	23.0	4208	34.2
1100	913	139	136	22.6	4183	33.3
1200	914	144	143	22.0	4183	34.4
1300	901	145	141	22.6	4133	34.0
1400	902	146	141	22.7	4133	34.0
1500	911	146	141	23.0	4158	34.5
1600						
1700						

Keystone #2 30 October 1968

Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	911	140	137	21.7	3982	32.0
0600	912	139	137	21.6	3982	31.9
0700	914	139	136	21.7	4007	31.8
0800	917	140	137	21.8	4007	32.3
0900	907	138	135	21.5	3982	31.4
1000	911	139	135	21.6	3982	31.5
1100	913	137	133	21.2	4007	31.0
1200	912	147	142	21.9	3982	33.1
1300	912	147	142	21.9	3982	32.9
1400						
1500						
1600						
1700						

Table 12 (continued). PLANT OPERATIONAL DATA

Keystone #2 31 October 1968						
Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	529	111	106	11.7	2344	14.5
0600	690	119	116	15.6	3049	20.4
0700	915	143	139	22.0	4032	32.7
0800	920	148	143	22.3	4057	34.0
0900	896	149	144	21.9	3956	33.4
1000	823	135	129	19.3	3629	27.4
1100	876	139	134	20.8	3881	30.2
1200	862	139	133	20.5	3805	29.6
1300	567	121	112	12.7	2495	16.5
1400	526	118	110	11.7	2318	14.9
1500	531	119	109	11.9	2344	15.0
1600						
1700						

Keystone #2 1 November 1968						
Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	911	139	130	21.9	4108	31.1
0600	917	140	130	22.0	4133	31.5
0700	912	140	130	21.9	4133	31.3
0800	915	141	131	21.9	4133	31.6
0900	891	142	131	21.4	4032	30.7
1000	727	135	121	17.0	3276	23.2
1100	690	136	120	16.0	3125	21.8
1200	823	145	127	19.3	3730	27.5
1300	788	144	125	18.5	3553	26.1
1400	764	143	123	17.9	3452	24.8
1500	715	141	119	16.6	3226	18.4
1600						
1700						

Keystone #2 2 November 1968						
Time EST	Load (mw)	T (°C)	DT (°C)	Vel (mps)	SO_2 (g/s)	Cal/s x10^6
0400						
0500	501	121	108	11.2	2243	14.1
0600	507	121	108	11.3	2268	14.3
0700	540	123	111	12.2	2394	15.6
0800	754	138	125	17.5	3352	24.5
0900	769	139	126	17.9	3427	25.2
1000	771	141	127	18.0	3427	25.4
1100	775	142	127	18.0	3452	25.7
1200	770	141	127	18.0	3427	25.4
1300	775	143	128	18.0	3452	25.8
1400						
1500						
1600						
1700						

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The conduct of LAPPES is continuously monitored by an advisory committee composed of J. Fuquay, D. Pack, R. McCormick, F. Gartrell, M. Smith, H. Panofsky, and D. Lohman. This committee meets twice yearly to review current progress and to suggest future activities.

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Figure 11. Keystone plume, March 19, 1968, 0657 EST.

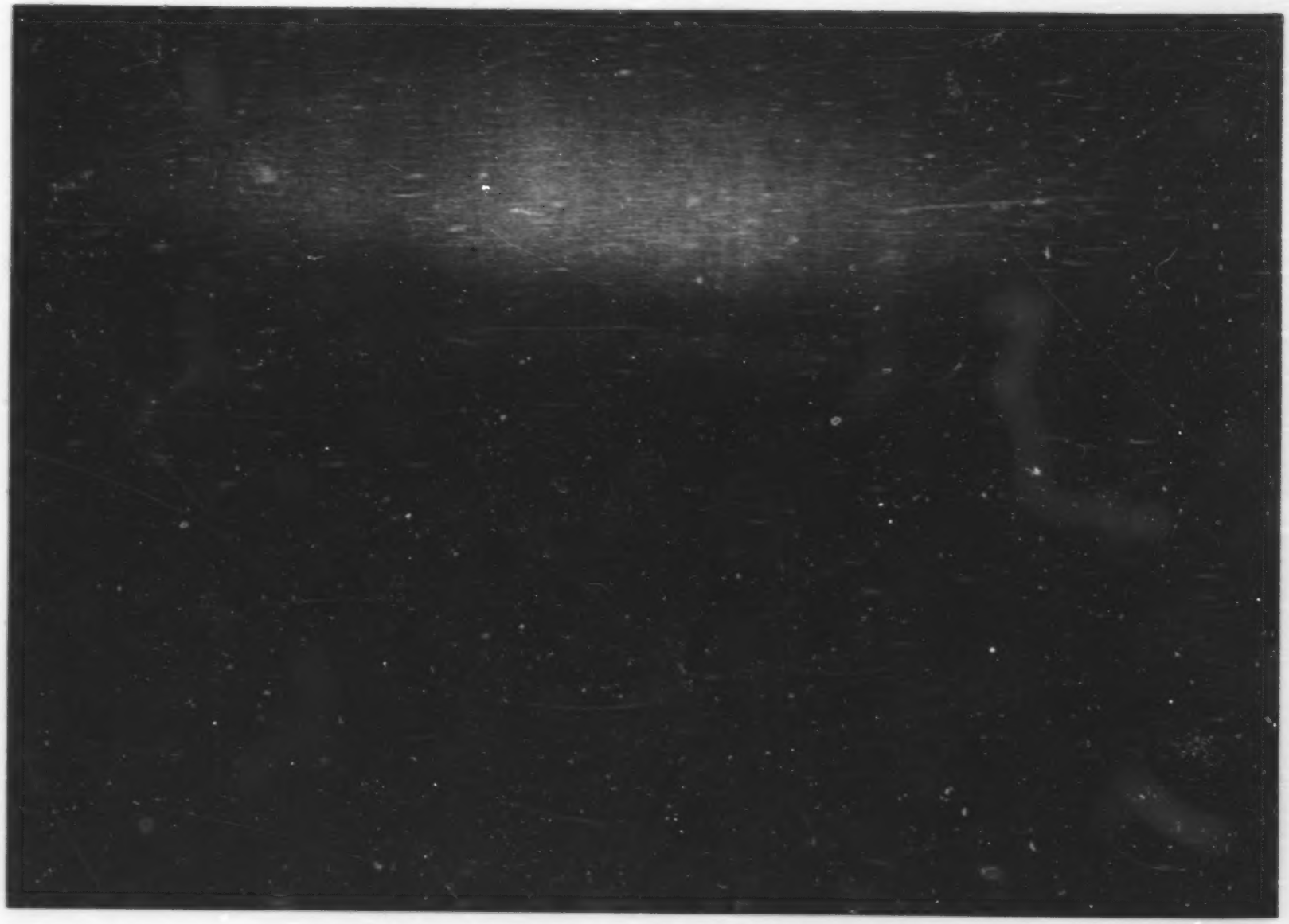

Figure 12. Keystone plume, October 16, 1968, 0727 EST.

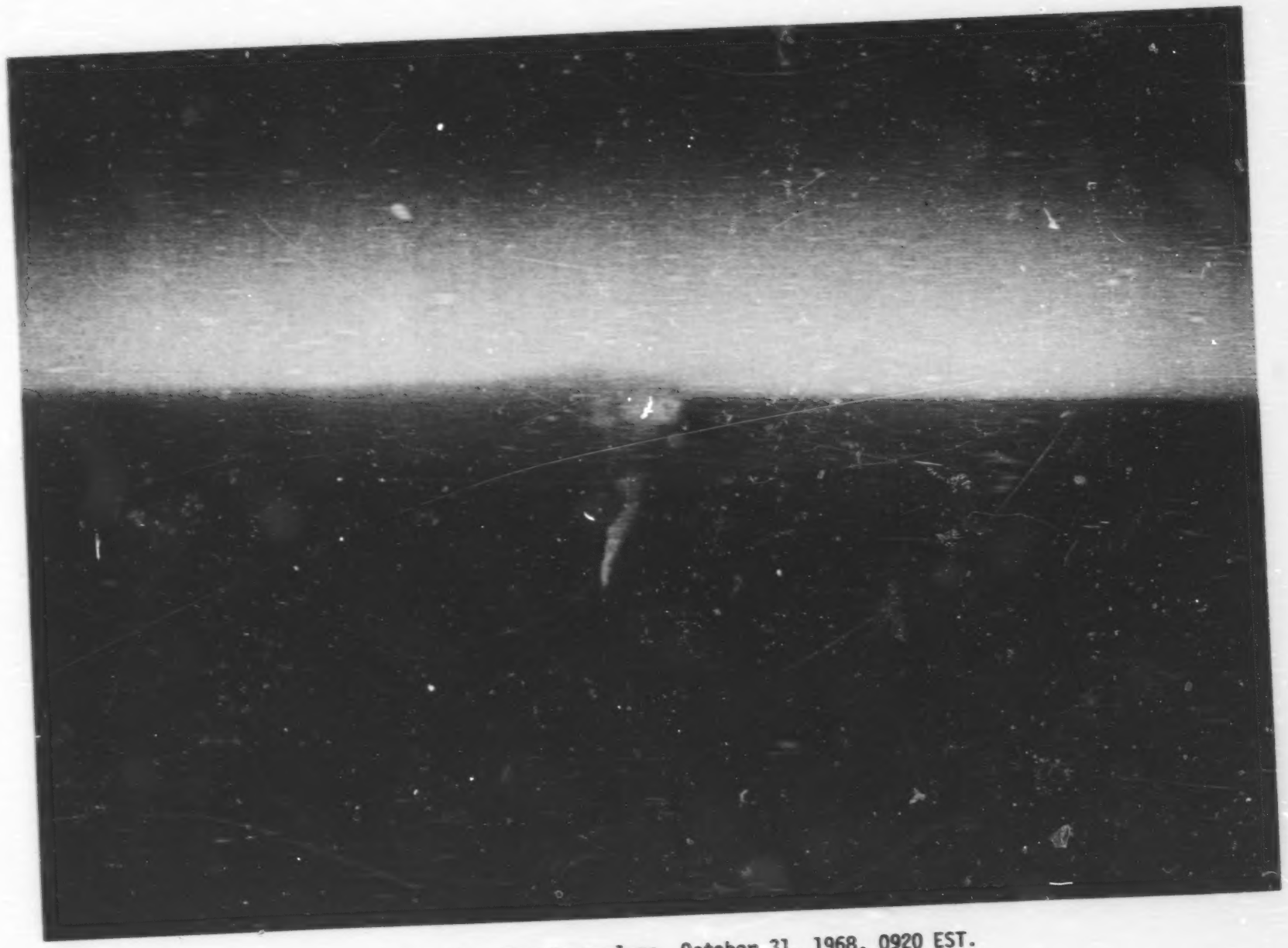

Figure 13. Keystone plume, October 31, 1968, 0920 EST.

Figure 14. Keystone plume, May 25, 1968, 1047 EST.

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